

# AI in Marketing

Applications, Insights, and Analysis

Edited by Hannah D. Walters and Rachel M. Hammond



“AI is radically transforming every aspect of marketing, including how we research, create, execute, deliver, and measure success. This book is a must-study for marketers looking to embrace the future of marketing, proving that those who master AI’s potential will lead the pack.”

**Courtney Deinert**, *Director, Industry Product and  
Solution Marketing for Telecom, ServiceNow*

“Artificial intelligence in marketing abounds. It is difficult to keep up with applications and implications for brands and consumers alike. The book addresses where and how AI will lead marketing in the future. Smartly written, timely, and concise, it is a great resource for marketing educators to adopt in their curriculum.”

**Brian A. Vander Schee**, *PhD, DBA, Indiana University  
Bloomington, Kelley School of Business*

“As a long-time professor of Marketing, I am looking for credible AI resources with a solid historical and theoretical foundation on how AI is, can be, and should be used in the profession. Practical examples and teaching tools are essential for integrating AI into my courses. *AI in Marketing: Applications, Insights, and Analysis* delivers exactly what I need.”

**Michael Wiese**, *PhD, Point Loma Nazarene  
University, Fermanian School of Business*



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# AI in Marketing

*AI in Marketing* equips students with the knowledge to understand the impact of artificial intelligence (AI) on marketing strategies, processes, and activities, empowering them to navigate the AI-driven marketing landscape confidently.

Divided into four parts, it provides a comprehensive exploration of AI's transformative role in marketing. The first part lays the groundwork, offering foundational insights into the intersection of AI and marketing. Part II explores the various applications of AI in marketing, and the tools marketers use to optimize their processes and deliver enhanced customer experiences. The third part focuses on leveraging AI for consumer insights, enabling marketers to craft data-driven strategies. The final part examines ethical considerations and the pedagogical integration of AI into marketing education. Each chapter includes real-world examples, exercises, discussion questions, key terms, and AI resources, empowering students to develop practical skills and industry-relevant knowledge.

Students studying in advanced undergraduate and postgraduate marketing courses will benefit greatly from this comprehensive textbook, preparing them for a future workplace that requires them to know how to use AI effectively, ethically, and responsibly.

The book is fully supported by online resources, including an instructor manual and customizable PowerPoint slides.

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# **AI in Marketing**

## **Applications, Insights, and Analysis**

**Edited by Hannah D. Walters  
and Rachel M. Hammond**

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To my family and friends who thought “sabbatical” meant “rest and relaxation”—I assure you, this is what I was doing the entire time.

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To my students whose questions and insights have pushed me to grow as an educator. Thank you for challenging me to think deeply, listen attentively, and teach with compassion. And yes, this *will* be on the test.

To Rachel, my co-editor, doctoral colleague, and dear friend. I’m so grateful we’ve navigated the highs and lows of academia together. Thank you for making this journey both productive and enjoyable.

—Hannah D. Walters

To my husband Ben: Thanks for supporting me, even when I overcommit. Your love, encouragement, and steady presence mean everything to me.

To my kids Madi, Parker, and Fiona: I love you with all my heart. I hope that you always see a path forward, know that I’ll always have your back, and remember that you are stronger than you can possibly imagine.

To my students: Your insight, creativity, and resilience inspire me every day. You have extraordinary gifts to share with the world, and I am deeply grateful for the opportunity to learn alongside you.

To Hannah: From day one of our doctoral journey, your friendship has been a gift. I’m forever grateful for the gift of time this project gave us.

—Rachel M. Hammond





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# Preface

Imagine a world where your marketing strategy isn't just a shot in the dark. Thanks to the intersection of marketing and artificial intelligence (AI)—a space where data and creativity meet to anticipate customer needs and transform how brands connect, the future of marketing is here, powered by AI and ready for those bold enough to embrace it.

This book explores the intersection of marketing and AI. While marketing is essentially about delivering value by providing goods and/or services that meet consumers' needs and wants, AI's abilities to simulate human intelligence and problem-solving capabilities enable marketers to make data-driven decisions, enhance customer experience, optimize customer interactions, and improve marketing efficiency. Even though AI has been around for 70+ years, generative AI has accelerated how we market, design products, communicate with consumers, conduct marketing research, and deliver value. With generative AI, we can create new content, including audio, code, images, text, simulations, and videos.

Marketing professionals already use generative AI for content creation, brainstorming, market research, ad personalization, and customer engagement. As a result, marketers who embrace AI are more effective, efficient, and productive. Future marketing professionals need to know how to use AI ethically and responsibly to be prepared for future job opportunities in marketing.

As former business professionals and current marketing and management educators, we felt the need to bridge this gap between what is being taught in the classroom and what is needed in industry. Because a key goal of marketing education is to prepare students for careers in the field after graduation, it is essential to continually update theoretical and practical knowledge and teaching practices to maintain relevance and alignment with current industry standards. Marketing educators need essential insights and knowledge to integrate AI into their marketing curricula.

To accomplish this goal, we contracted with Routledge to publish this book in late 2023. We sought chapter proposals and blind reviewers in the spring of 2024. In the summer of 2024, we conducted a double-blind review process to ensure objectivity, fairness, and academic rigor. A double-blind review is a peer review process in which both the authors and reviewers remain anonymous to each other. In academia, this type of evaluation plays a crucial role in maintaining the quality and integrity of the entire book. Eighteen contributors and two editors from six countries wrote and edited the twelve chapters of this book during the summer and fall of 2024. Production and publication followed in the spring of 2025.

The book is written for university marketing faculty and upper-level undergraduate and graduate marketing students. Each chapter equips marketing students with the knowledge to understand AI's impact on marketing strategies, processes, and activities, empowering them to navigate the AI-driven marketing landscape confidently.

This book is divided into four parts. The first section includes two chapters that lay the groundwork, offering foundational insights into the intersection of AI and marketing. Part two of the book explores the various applications of AI in marketing and the tools marketers use to optimize their processes and deliver enhanced customer experiences. This section includes five chapters. The book's third part focuses on AI's influence on consumer dynamics. The two chapters in this section focus on leveraging AI for consumer insights, enabling marketers to craft data-driven strategies. The last part of the book includes two chapters that discuss the ethical questions of AI in marketing and the pedagogical implications of AI in marketing education. In each chapter, we include a range of examples, exercises, discussion questions, key terms and definitions, and a list of AI resources to quickly build AI literacy and help students gain practical skills, making them more employable and prepared for the evolving demands of AI in marketing.

This book can be used across multiple courses in a marketing program. It could also be incorporated into an upper-level undergraduate senior capstone marketing strategy and/or marketing management course. There is a companion website for this book that we encourage you to explore at [www.routledge.com/9781032743332](http://www.routledge.com/9781032743332). The website contains additional teaching and learning resources and links to AI applications and tools.

On behalf of all the contributors, we, the editors, hope this book unleashes a new generation of AI-savvy marketers. Cheers to AI-mazing futures!

Sincerely,  
Hannah D. Walters and Rachel M. Hammond

# Acknowledgments

The editors acknowledge the responsible use of generative AI tools in developing this textbook, which includes idea generation, idea exploration, and language improvement. All text and content underwent rigorous revision by human authors.

## CHAPTER 1 WELCOME TO A BRAVE NEW WORLD

In the preparation of this chapter, the following Generative AI tools were used in accordance with Routledge and Taylor & Francis's AI policy:

- OpenAI's ChatGPT (versions 4 and 4o): Assisted with the chapter outline, ideation, and draft copy creation, using a custom-trained GPT based on over ten years of the author's writings. ChatGPT was also employed in revisions and in the creation of the author's bio and this acknowledgment statement followed by human editorial scrutiny and revision.
- Perplexity Pro: Utilized for research and identification of example articles relevant to the chapter's content. Perplexity was also used as a response to the editor's request for subsequent article references.
- Anthropic Claude 3.5: Provided additional drafts and revisions, supporting the writing and refinement process.

Generative AI tools were employed to enhance efficiency, support research, and foster creativity throughout the drafting and revision process. All final edits and the final draft were performed by human effort.

## CHAPTER 2 ADVANCING MARKETING STRATEGY WITH ARTIFICIAL INTELLIGENCE: A SYSTEMATIC LITERATURE REVIEW

Our use of generative artificial intelligence (GenAI) aligns with T&F AI policy which states the following: "Taylor & Francis welcomes the new opportunities offered by Generative AI tools, particularly in: enhancing idea generation and exploration, **supporting authors to express content in a non-native language**, and **accelerating the research and dissemination process**" (emphasis added).

Besides:

“Taylor & Francis supports the responsible use of Generative AI tools that respect high standards of data security, confidentiality, and copyright protection in cases such as:

- Idea generation and idea exploration
  - Language improvement
  - Interactive online search with LLM-enhanced search engines
  - Literature classification
  - Coding assistance”
- (emphasis added).

Based on these criteria, the author confirms the use of ChatGPT-4o for **Language improvement**.

### **CHAPTER 3 SYNERGIZING AI AND INTEGRATED MARKETING COMMUNICATIONS**

In preparing this chapter, the author used ChatGPT 4o and Grammarly for language enhancement to clearly express content in a non-native language and assist with editing.

### **CHAPTER 4 ARTIFICIAL INTELLIGENCE AS A CRUCIAL CATALYST IN REVOLUTIONIZING E-COMMERCE MARKETING**

Generative artificial intelligence (GenAI), specifically ChatGPT-4o and Grammarly Pro, was used to brainstorm, check grammar/spelling, and construct author bios. This was followed by human editorial scrutiny and rigorous revision. GenAI was NOT used to replace core researcher and author responsibilities. We just know this stuff.

### **CHAPTER 5 AI-DRIVEN BRANDING**

Generative AI tools were not used in the writing of this chapter.

### **CHAPTER 6 NAVIGATING INTERNATIONAL MARKETING WITH ARTIFICIAL INTELLIGENCE**

In this chapter, Generative AI was used to supplement and provide material for idea generation and exploration. The authors used ChatGPT 4o to give an example of a product description translated into German. A screenshot of the output was provided. Further outputs from ChatGPT, outlined in the text, were created to explore what it can do



for international marketers. Additionally, the authors developed a prompt using You.com (GPT 4o) to determine how international marketers could use You.com. This information was reworded and provided in the AI and Online Resources section.

## **CHAPTER 7 AI'S IMPACT ON FRONTLINE SALES**

For the chapter “AI’s Impact on Frontline Sales,” the author used Google’s Gemini with 1.5 Flash. The tool was used to initiate the generation of applications or points. For example, a summary of the technological and business model disruptions in the marketplace or challenges posed by AI in the workplace. Taking these summary points, rigorous research on each of these points was conducted in Google Scholar for academic articles and Google for policy/thought leaders (e.g., *World Economic Forum*), managerial (e.g., *Harvard Business Review*), and popular press (e.g., the *New York Times*) articles. The author then collated these data points to write the content without any support of Generative AI. Grammarly was used for grammatical checks only. Generative AI tools were not used for analysis or summarization or image creation. Figures were originally developed by the author.

## **CHAPTER 8 NEW PRODUCT DEVELOPMENT ENRICHED WITH AI**

The author utilized generative AI tools to conduct the literature review and translate the chapter. The author independently wrote the entire chapter, with generative AI serving as a tool to expedite the literature review based on keywords defined by the author, aligned with the chapter’s objectives and main findings (via Paperdigest.org). Scientific articles were sourced using web search engines (Google and Google Scholar), and selected articles were analyzed and translated into Polish (the author’s native language) to identify the most relevant scholarly works. The AI tools used include ChatGPT 4o, Gemini Advanced Model 1.5 Pro, Perplexity.ai with models Sonar Large, ChatGPT 4o, and Claude 3 Opus, all in paid versions to access the latest models. The author initially wrote the chapter in Polish, then translated it into English using DeepL, and the translated text was subsequently checked for style and grammar using Grammarly. Finally, the text was submitted for proofreading by a professional translator.

## **CHAPTER 9 CONSUMER BEHAVIOR AND AI**

In developing this chapter, the authors used the Generative AI tool ChatGPT-4o (temporary conversations—not tracked) for ideation, rephrasing, analysis, strategy formulation, and structuring the chapter. The authors employed this tool to enhance clarity, improve language, and facilitate the organization of content under the authors’ direct guidance, revision, scrutiny, and oversight.

## **CHAPTER 10 AI IN CONSUMER INSIGHTS**

The author used ChatGPT 3.5 to brainstorm classroom ideas but wrote the lesson plans. The author also used Grammarly to help with editing.

## **CHAPTER 11 EXPLORING THE ETHICAL IMPLICATIONS OF ARTIFICIAL INTELLIGENCE IN MARKETING**

Generative AI tools were not used in the writing of this chapter.

## **CHAPTER 12 IMPLEMENTING AI IN MARKETING EDUCATION**

ChatGPT (GPT-4o model) was used to generate output and links to that output to demonstrate ways AI can be used by marketing instructors to enhance student learning and engagement, to train students to use AI to improve their learning, and to provide student support through the use of custom GPTs.



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## PART I

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# Foundations and Frameworks of AI in Marketing

The introductory chapter, “A Brave New World,” includes a brief history of the development of AI and explores how AI revolutionizes marketing by creating hyper-personalized consumer experiences, enabling real-time, data-driven decisions, and optimizing creative and strategic processes.

Chapter 2 consists of a systematic literature review examining the impact of AI on marketing strategy. The chapter outlines six distinct fields in marketing significantly impacted by AI: 1) Performance measurement and analytics; 2) automation; 3) personalization and targeting; 4) customer segmentation; 5) positioning and branding; and 6) ethics on customer privacy.



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# Welcome to a Brave New World

*Bart Caylor*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Describe how historical technological revolutions, such as the Gutenberg Press and industrial revolutions, parallel today's advancements in artificial intelligence, especially in terms of societal transformation and marketing impact.
- 2 Explain the dual nature of AI in marketing, highlighting both the opportunities for hyper-personalization and campaign optimization and the ethical and societal challenges, such as data privacy and bias.
- 3 Analyze real-world examples of AI application in marketing (e.g., case studies like Publicis Group and Rory Flynn's MidJourney) to understand how businesses leverage AI for data-driven, hyper-personalized marketing strategies.
- 4 Discuss the ethical implications of AI use in marketing, including issues of data privacy, algorithmic bias, and the need for transparent, accountable practices.
- 5 Evaluate the role of agility and continuous learning for marketing professionals in an AI-driven industry, identifying strategies to adapt to the rapidly evolving AI landscape while maintaining ethical standards.

In the 1932 novel *Brave New World*, Aldous Huxley painted a picture of a technologically advanced society where innovation and scientific advancement played a significant role in creating a world that was very different from the one that existed in the past. It is key to this textbook, *AI in Marketing: Applications, Insights and Analysis*, to acknowledge Aldous Huxley's iconic work, which shows how AI technology could alter the current world.

In Huxley's dystopian world, technology was both a boon and a bane. It offers convenience while also posing significant ethical and societal challenges. His vision portrayed a society where technological advancements could manipulate human behavior and societal norms and raised profound questions about privacy, control, and the essence of humanity.

Similarly, today's artificial intelligence in marketing offers comparable dichotomies. AI presents vast opportunities for hyper-personalization, efficiency, and predictive insights. For instance, advanced AI algorithms can analyze vast datasets to discern patterns and predict consumer behavior with remarkable accuracy. This allows marketers to deliver highly personalized content to increase customer engagement and conversion rates. A study by McKinsey & Company found that personalization can deliver five to eight times the return on investment (ROI) on marketing spend and lift sales by 10% or more (McKinsey, 2023).

However, the flip side of this technological boon is the ethical and societal challenges it presents. Privacy concerns are at the forefront, as AI systems often require extensive data collection. This raises questions about data security and user consent. For example, the Cambridge Analytica scandal highlighted how data harvested without explicit consent could be used to influence voter behavior, leading to widespread public outcry and stricter regulations like the General Data Protection Regulation (GDPR) in Europe and the California Consumer Privacy Act (CCPA) in the United States (Cadwalladr & Graham, 2018).

Unfortunately, the potential for misuse of AI technology extends to bias and fairness issues. AI algorithms can inadvertently perpetuate existing biases if they are trained on biased datasets. This can—and will—lead to discriminatory practices in targeted advertising, where particular groups may be unfairly excluded or targeted based on their demographic characteristics. For example, Amazon developed an AI recruitment tool that showed bias against women because it had been trained on resumes submitted over a ten-year period, predominantly from male candidates (Dastin, 2018). The good news is that bias in AI only exists based on the existing bias baked into the data from which they are trained, making this a preventable issue.

Marketing professionals need to adhere to ethical standards vigilantly. This requires marketing professionals to comply with legal requirements *and* adopt best practices for transparency and accountability. Much like Huxley's dystopian world, the landscape in marketing is filled with transformation and complexity. It requires marketers to be innovators and stewards of ethical standards so marketers can ensure that the powerful tools at their disposal are used to enhance the human experience rather than diminish it. It is not easy to do, but it can be mastered.

This is indeed a brave new world.

## HISTORICAL CONTEXT

To fully understand AI in marketing, take a closer look at the historical context that laid the foundation for today's technological advancements. Two pivotal periods in history, the Gutenberg Press Revolution and the Fourth Industrial Revolution, explain how technological innovations can transform society.

## The Gutenberg Press

Johannes Gutenberg's invention in 1440, the Gutenberg Press, was a movable printing press. It became one of the most significant technological advancements in history and revolutionized mass communication and knowledge dissemination in the mid-15th century, which marked the dawn of the Information Age. Before this invention, books were difficult to copy by hand and, as a result, expensive to create. But Gutenberg's press enabled the mass production of books, drastically reducing their cost and making written works accessible to a broader audience (Quocirca, 2024).

The impact of the Gutenberg Press on society was profound. The democratization of knowledge played a pivotal role in the Renaissance, a period of renewed interest in art, science, and literature. It broke the elite's information monopoly by facilitating the dissemination of fresh ideas and knowledge. The press allowed Martin Luther's 95 Theses, the Protestant Reformation, to be disseminated widely, challenging the Catholic Church's authority and sparking religious reforms (Mark, 2022). Similarly, it laid the groundwork for the Scientific Revolution by making scientific works more widely available, fostering a culture of inquiry and discovery (Ghaffar, n.d.).

But with significant change comes great controversy. Much of the controversies surrounding the early days of printed materials can be found in today's debates about AI ethics. In the 16th century, the proliferation of printed books raised concerns about spreading misinformation and its destabilizing impact on societal norms. Authorities feared the loss of control over the dissemination of knowledge, leading to censorship and regulation of printed works. Similarly, today's AI technologies are under scrutiny, particularly those involving data privacy and algorithmic bias. Concerns about AI's potential to perpetuate existing biases and invade privacy have led to calls for regulatory frameworks to ensure ethical usage.

Guy Kawasaki, recognized as one of the most influential marketers and former Apple evangelist, highlights the importance of ethical considerations in technology adoption. On *The Higher Ed Marketer Podcast* he discussed the parallels between the power of historical innovations and the current AI revolution, emphasizing the need for responsible innovation to avoid repeating past mistakes. He also tied the controversies around the Gutenberg Press to today's prevalent fear of generative AI (Caylor & Singer, 2023).

It is a real struggle when technology disrupts, but it is necessary.

## Setting the Stage for Renaissance and the First Three Industrial Revolutions

The Gutenberg Press set the stage for subsequent historical periods of rapid advancement. The Renaissance, which spanned the 14th to the 17th centuries, saw an explosion of artistic, cultural, and scientific achievements. The press enabled the distribution of Renaissance ideas far beyond Italy, where the movement began, influencing all of Europe. The first Industrial Revolutions that followed were periods of significant technological and economic shifts characterized by the development of machinery and mass production techniques that further accelerated societal change (Roos, 2019).

The history of the various industrial revolutions is outlined as follows. The First Industrial Revolution is typically recognized as starting in the late 18th century, when water,



steam, and mechanical production equipment were used to enhance industry. The Second Industrial Revolution came in the late 19th century with the introduction of electricity for mass production. The Third Industrial Revolution is recognized as the introduction of electronics and computer technology in the mid-20th century, leading to the Fourth Industrial Revolution (History, 2009).

## The Fourth Industrial Revolution

The fusion of physical, digital, and biological worlds is fundamentally transforming society. It is this fusion that is considered the fourth industrial revolution.

AI is at the heart of this revolution, driving advancements across various sectors, including (you guessed it) marketing. Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, describes this era as different in scale, scope, and complexity from any previous era. The fusion of physical, digital, and biological enhances existing capabilities *and creates* new ways of operating and interacting with the world. Many recognize the advent of AI as the beginning of the Fourth Industrial Revolution (World Economic Forum, 2016).

Though it may feel like AI is new, artificial intelligence has been around for decades through various means. One of the most identifiable is Amazon and Netflix's suggestions. In actuality, John McCarty first used the term "artificial intelligence" in 1956 at the Dartmouth workshop exploring machine "intelligence" as a field of study. This means AI is, in fact, not *new*, but it has recently—and dramatically—advanced (Taylor, n.d.).

Each industrial revolution has resulted in significant societal changes, frequently met with resistance and fear of the unknown. The Fourth Industrial Revolution will be no different.

The First Industrial Revolution faced opposition from those who feared job loss due to mechanization. People who feared the changes would make their lives more difficult and threaten the status quo criticized the Second Industrial Revolution. The Third Industrial Revolution was opposed based on the fear that the new computer automation would remove the need for human assistance. Similarly, the Fourth Industrial Revolution's introduction of AI has sparked concerns about job displacement and the ethical implications of autonomous systems. However, history shows that while some jobs may be lost, new opportunities often emerge. Those who adapt to and embrace new technologies typically find themselves at the forefront of innovation.

The iterative nature of technological progress means that each new revolution builds on the foundations laid by previous ones. The advancements of the Fourth Industrial Revolution are possible because of the technological infrastructure and societal changes brought about by earlier revolutions. AI, as a product of this iterative process, benefits from the lessons and innovations of the past while paving the way for future developments.

## HOW AI AFFECTS MARKETING TODAY

Imagine this: A leading global brand launches a new product. Within seconds, AI algorithms analyze real-time data from social media, online forums, and consumer behavior to tailor personalized marketing messages. These messages, optimized for every

individual's preferences and behavior patterns, reach millions across multiple platforms almost instantaneously. Sales surge and the campaign achieves record-breaking engagement levels.

While this sounds like a scene from Steven Spielberg's 2002 film *Minority Report*, it is an authentic glimpse into the present-day power of AI in marketing.

AI-driven content and insights into consumer sentiment and behavior can significantly increase the success of today's marketing campaigns. Now, with the help of AI, marketing teams can analyze vast amounts of data from social media to predict and navigate the public's response and optimize their marketing strategy in real time to maximize impact. What could the aforementioned scenario do for those who need to sell a product or service? With this technology, those who sell could become more agile and create highly complex marketing campaigns with less effort.

## AI's Competitive Role

Within a short time, generative artificial intelligence has become a cornerstone in contemporary marketing. It influences everything from personalized consumer interactions to strategic decision-making processes.

As of the writing of this chapter in the spring of 2024, the integration of AI is now necessary for most businesses to keep their competitive edge. AI technologies—like large language models (LLMs), machine learning, natural language processing, and data analytics—enable marketers to develop campaigns, understand and predict consumer behavior with unprecedented accuracy, and execute in record time.

Businesses are increasingly eager to adopt AI tools like ChatGPT. A survey revealed that 57% of American workers have tried ChatGPT, with 16% using it regularly at work (Brooks, 2023). Interestingly, upper-management employees are three times more likely to use ChatGPT than non-managers due to its value in complex decision-making processes. This reflects the growing reliance on AI to streamline operations and enhance productivity in the workplace. The survey also indicates that 23% of workers use ChatGPT for written communication tasks such as drafting emails and reports, 18% to assist in creative ideation and brainstorming, and 13% for content creation, including social media posts and advertising content. Talk about widespread adoption—ChatGPT is one of the fastest widely adopted technologies since Netflix.

This widespread adoption is a crucial signifier of the necessity of AI. Without adopting it, companies will be left behind. Companies leveraging AI can quickly process and analyze vast amounts of data, providing insights that drive strategic decision-making and operational efficiency. Additionally, AI enhances product development by predicting market trends and consumer preferences, enabling companies to innovate faster and stay ahead of their competitors. In customer service, AI-driven chatbots and virtual assistants provide 24/7 support, improving customer satisfaction and loyalty while reducing operational costs. By integrating AI into their operations, companies gain a competitive edge and position themselves as forward-thinking leaders in their respective fields.

Today, AI technology is necessary to be competitive in most fields. Those who have been slow to adopt AI are already struggling to keep up with their competitors who have. This competitive influence will only grow over time.

## Change Management and Agility in the Age of AI

The dynamic nature of AI means that the skills and knowledge that are relevant today may become obsolete tomorrow. As AI continues to integrate into various marketing functions, the ability to adapt and acquire new competencies will become a vital tool in the relevant marketer's arsenal. Marketers should continue to embrace continuous learning to stay ahead of technological advancements and be relevant in their field.

A recent study revealed that 1 in 4 companies have already replaced workers with AI tools like ChatGPT (Resume Builder, 2023). Spooky right? That is a fear many have been worried about for some time. However, this shift does not necessarily mean the elimination of jobs. Instead, it is wiser to view this in a positive light. When AI tools replace jobs, it highlights a shift in job *roles*. Those who can effectively leverage AI will have a distinct advantage and will use it to make themselves an undeniable asset because AI is a tool that can enhance human capabilities. As a result, it will make those who are good at their work even better. Marketers who use it strategically will find new opportunities rather than face displacement.

As technological change accelerates, many mature leaders may choose to exit the workforce, finding the constant need for adaptation overwhelming. This will create a vacuum (and an opportunity) for emerging leaders comfortable with change management and agile thinking. These leaders will be the ones to guide their organizations through the complexities of the coming marketing transformation. Due to their belief in change management principles, they will be more likely to foster a culture of innovation and continuous improvement than previous leaders.

Agility, therefore, is vital.

The ability to pivot quickly in response to new information, market trends, and technological developments will define successful marketing strategies (and successful marketers). Agile leaders who guide technologically proficient marketing teams can now iterate rapidly, testing and refining their approaches to achieve optimal results with the new technologies. This will enable them to capitalize on emerging opportunities faster than their competitors.

The future of marketing lies in embracing change and cultivating agility. Marketers who develop the skills to learn, unlearn, and relearn will thrive in an AI-driven world (Toffler, 1970).

## WHAT IS THE ROLE OF MARKETERS IN LEADING CHANGE?

Nobody can deny that generative AI is experiencing exponential growth. In fact, according to a recent article by Goldman Sachs, their research "estimates AI investment could approach \$100 billion in the US and \$200 billion globally by 2025" (2023, para. 7). This growth is particularly evident in the marketing and advertising sectors, which currently lead the charge in the adoption and usage of AI technologies.

As generative AI continues to transform these fields, marketers are uniquely positioned to harness its potential. Currently, marketers are at the forefront of integrating these

technologies into everyday practices. A recent study highlighted that marketing is one of the top sectors utilizing AI tools like ChatGPT, with a 37% adoption rate, compared to much lower rates in other industries, such as healthcare, which stands at 15% (Sherr, 2024). Marketers have shown that by leveraging AI to analyze data, assist in creativity, generate content, and predict trends, businesses can achieve higher levels of personalization and engagement, ultimately driving better results (Newsletter Pro, 2024).

This adoption will help other industries see the benefits of AI. Sectors like technology, consulting, and manufacturing are gradually integrating AI, but they are more fixed in their current technologies and strategies than marketing is. Marketing's rapid embrace of these technologies provides a blueprint for successful implementation. Their expertise in using AI to enhance customer experiences and drive business growth positions sets the stage for a future where AI is integral to all aspects of business.

Marketers can and should lead the AI charge. The ability of AI to produce measurable results is what drives its widespread adoption in marketing, and it can do the same for all sectors of business. AI tools like ChatGPT are particularly popular for their ability to generate content, conduct market research, and provide insights into consumer behavior. But what is more important is that these tools give humans more time to be strategic and imaginative. Imagine how much more time you would have to work on the things that matter to you if AI helped you speed up your processes. That time gained is well worth the pain of adoption.

## **Leveraging AI Technologies to Drive Innovation and Customer Engagement**

The technologies of today—like large language models, machine learning, natural language processing, and predictive analytics—have shifted marketing from a largely creative and instinct-driven field to a data-intensive and technology-driven discipline. Adding generative AI to this shift allows marketers to harness vast amounts of data and use it to create highly personalized and effective marketing strategies. For instance, AI can analyze customer data to identify patterns and preferences, enabling marketers to segment audiences more precisely and tailor content to individual needs.

This level of personalization was previously unattainable (at scale) with traditional marketing methods. Most marketing teams could not personalize their outreach. Now, though, personalization can happen in a matter of seconds. Plus, AI-powered chatbots and virtual assistants provide instant, personalized customer service, yet another offering that is difficult for any marketing team to manage at scale.

Let us remember that AI's predictive capabilities are another game-changer. Marketers traditionally measured results by curating spreadsheets and trying to make sense of the statistics within them. But now, AI can analyze historical data and current trends within a matter of seconds. It can also predict future consumer behavior, allowing marketers to anticipate and proactively address needs. These tasks once made up a heavy portion of the marketer's time and, in truth, often did not provide a compelling customer experience. Now, with technology to aid with these tasks, marketers can drive innovation and customer engagement like never before.

## Examples of AI Use in Marketing

### Publicis Group's Investment in AI

Advertising agencies are increasingly incorporating AI into their creative processes. They use technologies, including generative AI, to develop innovative concepts, optimize ad placements, and predict campaign performance. For instance, they might use AI to analyze large datasets and identify the most effective advertising messages, which, in turn, quickly helps these agencies create more compelling and impactful campaigns. As a result, their advertising efforts are data driven and result oriented.

Publicis Group's staggering \$326 million investment in artificial intelligence clearly shows this use. By harnessing the power of AI, Publicis Group aims to unlock unprecedented levels of customer insights. They use AI to craft highly personalized and impactful marketing campaigns and to uncover intricate consumer preferences, trends, and behavioral patterns that would be nearly impossible to discern through traditional methods (Bonilla, 2024).

They are one of the world's preeminent communications firms, and this investment makes it clear that they recognize that AI is no longer a futuristic concept. They have embraced it as an essential tool for driving innovation and maintaining a competitive edge. Their \$326 million investment in AI will also focus on optimizing media spending and enhancing the overall effectiveness of marketing campaigns. This will help Publicis anticipate shifts in consumer behavior and market dynamics to quickly adjust their strategy.

Think about what this type of agility could do for a marketing campaign. What if you knew if a campaign was working 50% faster than you do now? How quickly would it allow you to ideate, test new strategies, and try another route to the campaign? How much would that maximize the return on investment for your business?

The interesting fact about this particular investment is that the ROI will be based on the money saved using the technology. Remember that investment number? \$326 *million*. This is a tangible reminder of how much time generative AI can save on daily marketing tasks.

### Rory Flynn and Midjourney

Rory Flynn is a trailblazer in generative AI, mainly through his innovative use of tools like Midjourney, an AI image-generation tool. With a substantial following of over 40,000 on LinkedIn, Flynn has earned the title "Midjourney Mastery Maestro." He helps brands and businesses use Midjourney to create time efficiencies and increase return on investment with AI (*LinkedIn*, n.d.). His goal is to show how AI can significantly streamline marketing processes while saving businesses substantial time and reducing costs. His content aims to demystify AI so that even those new to the technology can understand and implement these powerful tools.

In his courses and videos, Flynn discusses the importance of well-structured prompts to maximize the potential of Midjourney. He suggests a formulaic approach because clear and specific prompts lead to better results. Start with the most crucial elements, then add details to your prompt. This ensures that the AI prioritizes the essential aspects, creating more accurate and relevant images.

Flynn also views AI as a tool to amplify productivity and reduce costs while maintaining brand consistency. He encourages the systematic integration of AI into business processes, blending technology with creativity seamlessly through “asset hacking,” which involves using AI to reverse-engineer and multiply existing brand assets and ensures consistency and style across all generated images. This process starts with organizing existing brand visuals to train Midjourney on a specific style. Next, the Describe function in Midjourney breaks down these images into core elements, allowing for the creation of similar, on-brand visuals. Finally, combining these outputs with detailed descriptions from ChatGPT enhances the prompts, ensuring the generated images are both visually striking and perfectly aligned with the brand (Foreplay, 2024).

Adopting Flynn’s strategies means unlocking new levels of efficiency and creativity for marketers. Moreover, the ability to generate personalized, on-brand images at scale can significantly enhance the effectiveness of marketing campaigns.

### Persado Marketing AI Company

Persado is a marketing AI platform that uses generative AI to create highly personalized marketing messages and campaigns. Their AI platform collects data on customer language preferences and generates tailored messages that resonate with each individual. That way, each message is finely tuned to the recipient’s preferences and behaviors (Persado, n.d.).

Persado’s generative AI models are trained on a massive dataset of over one million previous marketing campaigns and performance data. This allows the AI to understand what types of language, emotions, and descriptions perform best for different industries, products, and customer segments. By analyzing this data, the AI can generate thousands of message variations for a campaign by combining words, phrases, and emotional tones. These messages are then scored based on predicted performance, and the top-performing ones are presented to the marketing team for selection.

Throughout their case studies, Persado explains that analyzing the messaging data can provide anywhere from a 25–37% click rate increase on digital marketing campaigns compared to the historical and manual ways of approaching campaign creation. Their platform is a true example of data-driven marketing at its best and showcases how this technology can be leveraged to create hyper-personalized marketing content that drives significantly better results (Persado, n.d.).

## The Importance of Adaptability and Continuous Learning

Technology is rapidly advancing, and the fast pace of technological advancement means the skills and knowledge required in marketing are constantly evolving. Staying competitive now means staying updated on the latest AI technologies and understanding how to leverage them effectively. Unless you actively integrate strategic thinking into your workflows and continually consider how AI can be included in your marketing processes, you will get left behind!

It can be easy to avoid change, especially when keeping up with the new technology can feel like a hassle. But the moment you block yourself from continuous learning is when you block your ability to adapt to the market. Right now, marketers play a crucial

role in driving the change that AI technologies have brought about because they have to be agile to be effective. By leveraging AI to drive innovation and customer engagement, marketers can enhance their strategies and set new standards for the industry.

## **FUTURE APPLICATIONS OF AI IN MARKETING**

It is clear that AI's integration will be a fundamental shift in how marketing strategies are conceived and executed. Big companies like Sephora and Amazon are already harnessing the power of AI to enhance customer experiences and drive sales.

- 1 Sephora: Founded by Dominique Mandonnaud in 1970 in Limoges, France, Sephora operates over 2,600 stores worldwide, offering a vast array of beauty products. They are a global leader in beauty and cosmetics retail and have leveraged AI to enhance customer experience through personalized recommendations and virtual consultations.
- 2 Amazon: Founded by Jeff Bezos in 1994 and known primarily for its e-commerce platform, Amazon has diversified into various sectors, including cloud computing, digital streaming, and artificial intelligence. The company's sophisticated AI algorithms analyze vast amounts of data to create highly personalized shopping experiences.

Let us take a deeper look at the AI applications each of these companies have incorporated.

Through consumer research, Sephora learned that the abundance of beauty products often made customers feel overwhelmed. To resolve this, the company introduced a chatbot-driven interactive quiz that acts as a virtual beauty consultant. These advanced chatbots offer personalized product recommendations based on individual responses rather than generic answers. It has been so successful that Sephora expanded the service to platforms like Facebook Messenger, allowing customers to receive virtual color matches, book beauty sessions, and interact with KikBot. This chatbot provides beauty tips and tricks (Parsani, 2024).

Meanwhile, Amazon utilizes AI to create a highly personalized shopping experience. When users visit Amazon, they encounter a tailored section of recommended products and deals. This is not a random assortment but a carefully curated list generated by Amazon's AI. The technology analyzes a wealth of data, including past purchases, items left in the cart, and browsing history, to predict and suggest products that might interest the shopper. This personalization strategy has proven incredibly effective, reportedly driving 35% of Amazon's sales and transforming casual browsers into loyal customers (McKinsey, 2013).

As AI technology continues to evolve, its potential applications in marketing are only set to grow. Here are a few ways artificial intelligence will likely change the marketing industry.

### **The Future Imagined**

#### **Hyper-personalized Experiences**

In the near future, marketers will be expected to leverage AI to create hyper-personalized experiences that precisely cater to individual consumer preferences. A fashion retailer might



use AI to analyze a customer's past purchases, browsing behavior, social media activity, and even the latest fashion trends to curate a personalized shopping experience. This AI system could predict which new arrivals will likely appeal to the customer and send a tailored email with a selection of outfits complete with styling tips and personalized discounts.

If you were the customer, wouldn't that catch your attention?

An AI-driven app could notify customers that a new collection has arrived in their favorite color and style, suggesting specific items that match their fashion preferences. It might even generate a virtual fitting room experience, allowing the customer to see how different outfits would look on them using augmented reality (AR). This level of personalization enhances the shopping experience, increases customer satisfaction, and drives higher conversion rates by ensuring that marketing efforts are highly relevant to each individual consumer.

How does this apply to higher education? AI's ability to process and analyze vast amounts of data quickly means personalized experiences can be updated in real time, reflecting the latest trends, consumer behavior, and personal preference changes. This means that higher education institutions can tailor their marketing efforts to prospective students, offering them content and experiences that resonate with their current interests and needs. This could be anything from a hyper-personalized email campaign to a website that shows specific programs and offerings based on the location of the reader. As a result, institutions can foster stronger connections with prospective students, improve engagement, and ultimately increase enrollment rates.

Other industries are also poised to benefit from AI-driven hyper-personalization. In the hospitality sector, hotels could use AI to tailor recommendations for amenities and local attractions based on guest preferences and past behaviors. Similarly, in the food and beverage industry, restaurants could employ AI to suggest personalized menu items or promotions based on a customer's dietary preferences and ordering history. The opportunities will be endless.

## Nimbleness in Marketing Strategies

AI's predictive capabilities will allow marketers to anticipate market trends and consumer needs. For example, a food delivery service could use AI to analyze data from various sources—including social media trends, weather patterns, and local events—to predict changes in consumer demand. The AI could then identify that an upcoming music festival in the city is likely to increase the demand for certain types of food, such as quick bites and beverages. With this information, the marketing team could quickly pivot their strategy to focus on promoting these items and creating targeted campaigns that highlight special offers and quick delivery times to festival-goers. As a result, this would counterbalance the otherwise usually "slow" day for the company. They could even use geo-targeting to send personalized ads to people in the vicinity of the festival, offering discounts or bundle deals that cater to their immediate needs!

The ability to predict and respond to market trends in real time means more effective marketing than any have experienced in the last century. Businesses no longer have to be reactive; now, they can be proactive in their marketing and reduce the risk of missed opportunities.



AI can also help marketers anticipate broader economic and cultural shifts that influence consumer behavior across all industries. During the COVID-19 pandemic, food service businesses that might have leveraged AI to analyze changing consumer habits would have adopted their marketing strategies more swiftly and effectively. Without this ability, many businesses reacted too slowly, causing permanent closures (NCBI, 2020). If AI-driven insights were available to them at that time, they could have pivoted faster to online engagement, tailored messaging to reflect heightened health concerns, and adjusted product offerings to meet new demand patterns in such situations.

In the financial services sector, AI can predict shifts in consumer spending and investment behaviors, allowing financial institutions to tailor their marketing strategies accordingly. They could use AI to analyze market data, economic indicators, and customer profiles to help banks and investment firms anticipate customer needs and preferences, enabling them to offer personalized financial advice, products, and services. These insights could also be hyper-personalized to locations, cities, and neighborhoods and applied to smaller footprints, reflected in one-to-one digital marketing and digital outdoor and public advertising.

No matter what industry you work in, integrating AI into your processes will allow you to become more nimble than you previously were.

### Strategy vs. Execution: Balancing Creative Strategy with Execution Efficiency

Traditionally, marketing has involved a clear division between creative strategy (developing the overarching concepts and messages) and execution (implementing these strategies through various channels). Now, AI blurs these lines by providing tools that enhance both aspects simultaneously.

For example, AI can analyze consumer data to identify key insights and trends that inform the creative strategy. It can suggest themes, messages, and formats likely to resonate with the target audience, helping marketers develop more effective campaigns. At the same time, AI can automate many execution tasks, such as A/B testing different ad variations, optimizing ad placements across multiple platforms, and adjusting bids in real time to maximize ROI (Spair, 2024).

This integration of strategy and execution means marketing teams can operate more efficiently and effectively. They can spend more time on high-level strategic thinking and creative development while relying on AI to handle the granular details of execution. This shift will likely result in new roles within marketing teams, such as AI strategy specialists and data-driven creatives, who combine traditional marketing skills with expertise in AI and data analysis (Perrotta, 2023).

AI will also provide continuous feedback on the performance of marketing campaigns, allowing for real-time adjustments and iterative improvements. (Larsson, 2024) This approach to marketing will ensure that campaigns remain effective over time, adapting to changing consumer preferences and market conditions. As a result, marketers will better balance strategic planning and tactical execution, driving more impactful and efficient marketing efforts.

## Ethical Considerations

As AI continues to evolve, marketers need to consider the ethical implications of these technologies. In fact, Gabriela Ramos, Assistant Director-General for Social and Human Sciences of UNESCO, said,

The world is set to change at a pace not seen since the deployment of the printing press six centuries ago. AI technology brings major benefits in many areas, but without the ethical guardrails, it risks reproducing real-world biases and discrimination, fueling divisions and threatening fundamental human rights and freedoms.

(UNESCO, n.d.)

Issues such as data privacy, algorithmic bias, and the potential for AI to be used in manipulative ways should be proactively addressed. This means marketers will need to adopt ethical frameworks and best practices to ensure that AI is used responsibly and build trust with consumers and stakeholders.

One key ethical consideration is the use of consumer data. AI-driven marketing relies heavily on data to deliver personalized experiences, but this raises concerns about how data is collected, stored, and used. For this, robust data privacy policies are required so marketers can obtain explicit consent from consumers before using their data for AI-driven campaigns. One notable example of a company that effectively balanced AI-driven marketing with data privacy is Spotify's "Wrapped" campaign. It offers a personalized summary of the user's listening habits at the end of the year and has become incredibly popular. This campaign minimized data usage and respected user privacy while harnessing AI to create unique and engaging content. Spotify did all this by utilizing only behavioral data, maintaining user anonymity, and delivering a customer experience (Carlescu, n.d.).

Companies that openly communicate how they collect, use, and protect user data build stronger customer relationships. Consumers are more likely to feel secure and respected when they are aware of and can control their data sharing. By prioritizing ethical considerations, marketers can harness the power of AI responsibly, ensuring that their strategies drive business success and contribute positively to society.

## Evolving Marketing Roles and Skills

The rise of AI in marketing is also expected to lead to the evolution of marketing roles and the development of new skill sets. As AI takes over more routine and data-intensive tasks, marketers will need to focus on higher-order skills such as strategic thinking, creative problem-solving, and human-centered design. Roles that blend creativity with technical expertise, such as data-driven content creators and AI ethicists, will become increasingly important and needed in the corporate world.

Generative AI is a tool to support human creativity. This means a data-driven content creator might use AI tools to generate insights about audience preferences and create highly engaging content optimized for performance. If they are also AI ethicists, they

will take this one step further and ensure that AI-driven marketing practices adhere to ethical standards and do not inadvertently perpetuate biases or infringe on consumer privacy.

Marketers should be both data-driven content creators and AI ethicists. To become both, they will need to stay informed of the latest AI developments to understand these technologies and know how to leverage them to enhance their strategies. This may involve ongoing education and training in AI tools and techniques and staying informed about emerging trends and best practices. As this dual responsibility becomes a reality, it will be paramount that marketers embrace learning and curiosity, especially because the unique potential of AI does not stop at its technological capabilities. The mindset of those who use it also has an impact on its potential. Marketers who remain curious and committed to continuous learning will be better equipped to harness AI's full potential. With it, they will drive and maintain a competitive edge in an ever-changing market, even when their roles shift.

The ability to “learn, unlearn, and relearn” is particularly valuable. Danny Stefanic, CEO and Founder of the Hyperspace Metaverse Platform, said, “Embracing continuous learning culture is necessary to stay relevant and adaptable to technological advancements and foster organizational growth” (Hyperspace, n.d.). As generative AI technology constantly evolves, rigid strategies can quickly become outdated. If marketers prioritize fostering a culture of curiosity, they can stay ahead of the curve while focusing on experimentation and adaptability, which allows them to pivot quickly in response to new insights and trends.

That is why optimism and a forward-thinking attitude are vital as marketers embrace technological advancements. The rapid development of AI tools showcases the vast potential for creativity and efficiency in marketing. By staying curious and committed to learning, marketers can unlock new levels of creativity, efficiency, and impact to actively drive the evolution of marketing practices.

## CHAPTER SUMMARY

This chapter has explored how AI revolutionizes marketing by creating hyper-personalized consumer experiences, enabling real-time, data-driven decisions, and optimizing creative and strategic processes. Industry leaders like Rory Flynn and Publicis Group have demonstrated the practical applications and significant benefits of integrating AI into marketing strategies. Generative AI's capacity for hyper-personalization will allow marketers to create deeply resonant experiences tailored to individual consumer preferences. Predictive capabilities will enable more agile strategy pivots, ensuring marketing efforts remain relevant and impactful. Furthermore, AI will help balance creative strategy with execution efficiency, potentially reshaping traditional marketing roles and fostering the development of new skills.

Remember the controversy over the Gutenberg Press? With great change, there will always be great caution. Marketers will only stay ahead of the game if they embrace curiosity and a willingness to learn, unlearn, and relearn. This trait alone will be a defining characteristic of successful marketers in this new era.

This textbook is your first stepping stone to understanding how to effectively use AI, paving the way for lifelong learning and relearning in this field. In the following chapters, marketers of every industry will discover the key ways you can use AI to become highly agile and efficient.

## KEY TERMS

- **Algorithmic Bias:** Algorithmic bias refers to the systematic and replicable errors in computer systems that lead to unequal and discrimination based on legally protected characteristics, such as race and gender (Jackson, 2021).
- **Artificial Intelligence:** The technology that enables computers and machines to simulate human intelligence and problem-solving capabilities.
- **Data Bias:** Data bias refers to the systematic and replicable errors in AI systems that arise from training on datasets that are not representative of the real-world population, leading to unequal outcomes and potential discrimination against certain groups. This form of bias is rooted in the historical and societal contexts reflected in the data, which may underrepresent or misrepresent particular demographics or characteristics (Schwartz et al., 2022).
- **Ethical AI:** The practice of developing and deploying AI technologies in a manner that is fair, transparent, and free from bias, promoting corporate social responsibility.
- **Fairness in Decision-making:** The absence of any prejudice or favoritism toward an individual or group based on their inherent or acquired characteristics (Mehrabi et al., 2021, p. 1).
- **Fourth Industrial Revolution:** The fusion of physical, digital, and biological systems fundamentally transforming society through technological advancements, with AI at the core, driving innovations across various industries, including marketing.
- **Generative Artificial Intelligence:** Advanced algorithms that can create new content, including audio, code, images, text, simulations, and videos.

## DISCUSSION QUESTIONS

### 1 Historical Context and AI in Marketing

- a How does Aldous Huxley's *Brave New World* illustrate the dual nature of technological advancements?
- b What are the similarities between the ethical and societal challenges AI poses in marketing today and those depicted in Huxley's dystopian society?
- c Compare the Gutenberg Press's impact on society with AI's potential impact on marketing. What lessons can marketers learn from the historical adoption of the Gutenberg Press?

## 2 AI in Marketing Today

- a Explain how AI can enhance personalization in marketing. Provide examples from current marketing practices.
- b What are the key ethical concerns associated with AI in marketing, particularly regarding data privacy and algorithmic bias?
- c Discuss the significance of the Cambridge Analytica scandal in shaping current data privacy regulations like GDPR and CCPA.
- d How can marketers ensure they are using AI ethically while maintaining transparency and accountability?

## 3 Future Implications of AI in Marketing

- a Describe the Fourth Industrial Revolution and its relevance to AI in marketing.
- b How has AI changed the competitive landscape for businesses in terms of marketing strategies and consumer engagement?
- c Explain the concept of “hyper-personalization” and how AI facilitates this in marketing.
- d Discuss the potential future applications of AI in marketing and how they could transform the industry.

## 4 Ethical Considerations and AI

- a What are the main ethical considerations marketers must address when implementing AI technologies?
- b How can companies balance the need for data-driven marketing with the ethical obligation to protect consumer privacy?
- c Discuss the role of transparency in building consumer trust when using AI in marketing.

## 5 Change Management and Continuous Learning

- a Why are adaptability and continuous learning essential for marketers in the AI age?
- b How can marketing professionals stay ahead of technological advancements and remain relevant?
- c Discuss the importance of fostering a culture of curiosity and experimentation within marketing teams.

**TABLE 1.1** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>ChatGPT</b>	<a href="https://chatgpt.com/">https://chatgpt.com/</a>	A specific generative AI tool used for content creation, ideation, and written communication.
<b>MidJourney</b>	<a href="http://www.midjourney.com/">www.midjourney.com/</a>	An AI image-generation tool used for creating visuals based on user prompts.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



**FIGURE 1.1** QR Code to Online Support Material

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# Advancing Marketing Strategy with Artificial Intelligence

## A Systematic Literature Review

*Myriam Ertz and Mehrdad Kordi*

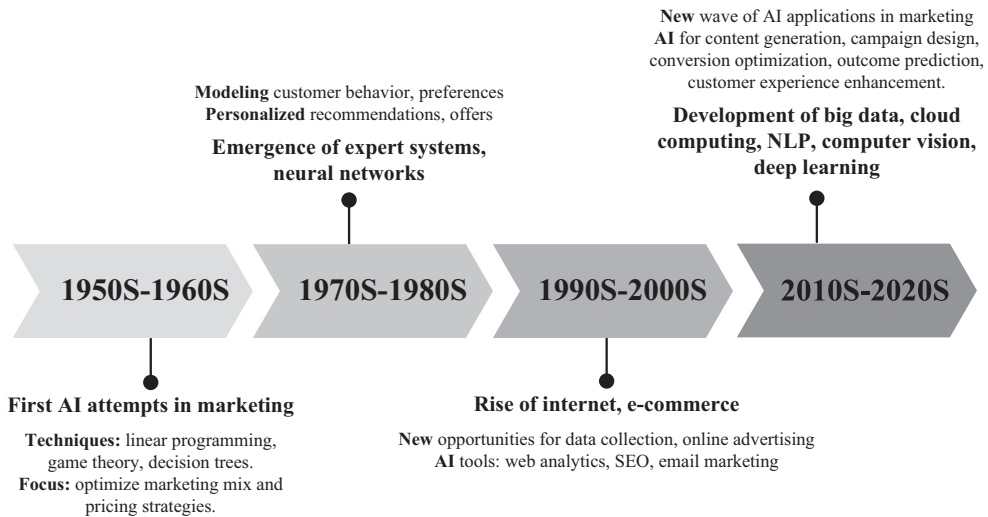
### LEARNING OBJECTIVES

Readers will be able to:

- 1 Understand comprehensively the evolution and current state of artificial intelligence (AI) integrating with marketing strategy (MS).
- 2 Identify and understand the six key areas where AI significantly impacts MS, including performance measurement, automation, personalization, customer segmentation, positioning and branding, and ethical considerations regarding customer privacy.
- 3 Comprehend how AI enhances operational efficiency, personalization, and strategic optimization within marketing practices while addressing the accompanying ethical concerns related to data privacy and security.
- 4 Outline the importance of transparent and responsible AI usage to maintain consumer trust and achieve sustainable success in marketing endeavors.

### INTRODUCTION

Integrating artificial intelligence into marketing strategy has undergone a transformative evolution, especially in the past few decades. While the conceptual underpinnings of AI, established by visionaries like Alan Turing in the 1950s, laid the groundwork, it was not until the late 1990s and early 2000s that AI began to make a substantial impact on MS.



**FIGURE 2.1** The History of AI Development in Marketing Strategy

(Source: The authors)

This period saw the initial implementation of AI through data mining and customer relationship management (CRM) systems, marking the beginning of a significant shift in how businesses approached marketing. The true revolution, however, came in the 2010s with the advent of advanced Machine Learning (ML) and Deep Learning (DL) algorithms while Big Data Analytics started proliferating. Companies such as IBM—with its Watson platform—and Google spearheaded this transformation through its AI-driven advertising solutions. Like Amazon and Netflix, pioneers in the e-commerce space showcased AI's potential by leveraging ML/DL to deliver highly personalized product recommendations and content to their users. These applications demonstrated AI's capacity to analyze vast datasets, optimize ad placements, and enhance user experiences by setting new standards in MS (Conick, 2017; Davenport & Ronanki, 2018; Jasminara, 2023; Syam & Sharma, 2018). Figure 2.1 summarizes this four-stage evolution, with contemporary MS in the fourth phase.

In e-commerce, generative AI (GenAI) has further expanded the horizons of MS. GenAI technology automates the creation of diverse content types, including product descriptions, reviews, images, and personalized recommendations, streamlining operations and enhancing customer engagement. For instance, GenAI can craft detailed product descriptions from basic specifications, generate unique recommendations tailored to individual preferences, and produce customized content and realistic images for products. According to a report by MarTech (2023), 73% of marketers in the United States used GenAI in their companies as of March 2023. This boosts operational efficiency, enriches the customer experience, and drives sales growth (MarTech, 2023). Furthermore, the global AI market size is projected to experience substantial growth, reaching nearly 2,000 billion USD by 2030, which reflects increased adoption and technological advancements

(Statista, 2024). Despite these advancements, the integration of AI into MS has raised significant ethical concerns, particularly regarding data privacy and security. As AI systems become more sophisticated and the volume of data they handle increases, questions arise about data usage, transparency, and consumer privacy protection. Addressing these ethical issues is crucial for maintaining consumer trust and ensuring responsible AI deployment in marketing. Ethical AI practices must prioritize transparency, accountability, and the safeguarding of consumer rights (Baek, 2023; Feuerriegel et al., 2024; ScaleupAlly, 2024).

Looking ahead, the potential of AI in MS continues to expand, with emerging trends promising further innovations. Future developments may include more refined predictive analytics, enhanced personalization through advanced algorithms, and the convergence of AI with technologies like augmented reality (AR) and virtual reality (VR). These advancements are expected to provide deeper insights into consumer behavior and enable marketers to engage audiences in more meaningful and impactful ways. This chapter aims to explore the current state of AI in MS, future trends, and the ethical considerations surrounding its use. According to Burgers et al. (2019), the first step in a systematic literature review is to formulate clear and specific research questions (RQs) to set the scope and focus of the study. Accordingly, the following RQs guided the research for this chapter:

- 1 What is the current state of scholarly research on marketing strategy with artificial intelligence?
- 2 How is artificial intelligence reshaping marketing strategies and engagement?
- 3 How can artificial intelligence in marketing be ethical and respect privacy while enhancing effectiveness?
- 4 What are the future trends of using artificial intelligence in marketing strategies?

## Methods

### Sample

In this chapter, we explore how artificial intelligence is currently used in marketing strategies by conducting a thorough review of existing literature. We chose a systematic literature review (SLR) as our main method because it allows for a careful and structured analysis of existing sources, helping us gain deeper insights beyond just summarizing previous studies (Hulland & Houston, 2020). This approach also helps prevent bias from selectively choosing publications (Nightingale, 2009) and supports the creation of evidence-based guidelines for practitioners (Kitchenham et al., 2009).

### Selection Criteria and Databases

We set clear inclusion and exclusion criteria to capture all relevant studies. We focused on research that delves into the history of MS, examines the use of AI in MS, and looks at their combined effects. We included only peer-reviewed studies published after 1980 to concentrate on recent developments, especially given the rapid advancements in AI in recent decades. We excluded non-primary research to focus on original contributions to the field (Ertz et al., 2022; Shashi et al., 2024).

## Databases

We used Scopus as our primary database for our literature search due to its broad coverage of scholarly materials (Baas et al., 2020; Elsevier, n.d.; Scopus, 2023). We also consulted other reputable databases like Springer Link, Wiley, Emerald, Taylor & Francis, Sage Publications, IEEE Access, and MDPI to broaden our search and avoid missing important studies. We employed additional strategies such as backward and forward searches, manual reviews, and website searches to enhance the depth and comprehensiveness of our review (Harari et al., 2020).

## Review Protocol and Outcomes

We crafted our search terms based on past research on AI (e.g., Ertz et al., 2022). Keywords included “Artificial Intelligence,” “Generative AI,” “Machine Learning,” “Big Data,” “Chatbot\*,” “Deep Learning,” and terms related to marketing like “Marketing Strategy,” “Digital Marketing,” “E-commerce,” and “Customer Segmentation.” We searched for these terms in the titles, abstracts, or keywords of papers, as these sections are crucial for capturing the main themes of academic articles (Bramer et al., 2017). Our search covered publications up to April 29, 2024, acknowledging that AI is a relatively new topic in marketing. Our initial search yielded 3,738 articles from 477 journals. After applying our inclusion and exclusion criteria, we narrowed this down to 238 articles published in 92 journals. This refined selection provides a strong foundation for analyzing how AI integrates with MS and enhances the credibility of our study. We followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) framework to ensure a rigorous and transparent selection process (Moher et al., 2009).

## Analysis and Key Findings

Our coding process, conducted independently to ensure accuracy and minimize bias (Moher et al., 2009; Page et al., 2021), revealed six main topics in the literature:

- 1 **AI in Customer Segmentation:** Studies in this area explore how AI helps identify distinct customer groups for targeted marketing (e.g., Dataforest, 2024; Kasem et al., 2024).
- 2 **Personalization and Targeting:** Research focuses on how AI enables personalized marketing efforts, enhancing customer experiences (e.g., Huang & Rust, 2021).
- 3 **Positioning and Branding:** This topic examines how AI influences brand positioning and the creation of brand identities (e.g., Keohane, 2018; Thakur & Kushwaha, 2024).
- 4 **AI-Driven Marketing Automation:** Studies look at how AI automates marketing tasks, improving efficiency and effectiveness (e.g., Lyu et al., 2023).
- 5 **Performance Measurement:** Research evaluates how AI tools measure and analyze marketing performance (e.g., Moinuddin et al., 2024; Molenaar et al., 2023; Rashid et al., 2024).
- 6 **Ethics on Customer Privacy:** This area addresses concerns related to privacy and ethical considerations in AI-driven marketing (e.g., Aldboush & Ferdous, 2023; Kumar & Suthar, 2024).

## Trends and Geographic Scope

We observed that the number of publications on AI in MS has grown significantly since 2017. This surge aligns with major companies like Amazon, eBay, Shopify, and Alibaba adopting AI to improve personalization and customer engagement, making tools like chatbots and recommendation systems essential (Monjur et al., 2023). Geographically, most studies were conducted in the United States ( $n = 52$ ), followed by China ( $n = 38$ ), the United Kingdom ( $n = 26$ ), and India ( $n = 26$ ). This distribution reflects the global interest and investment in AI technologies within the marketing sector.

## Keywords Analysis

Using VOSviewer for keyword co-occurrence analysis, we found that beyond central terms like AI and Machine Learning, there is growing interest in sentiment analysis, influencer marketing, ethics, blockchain, AI adoption, and consumer engagement (Van Eck & Waltman, 2010). These emerging topics indicate where the field is heading and highlight new avenues for research.

## Research Methods and Theoretical Frameworks

Our review revealed that quantitative methods were most commonly used ( $n = 93$ ), involving surveys and advanced data analysis techniques like ANOVAs, regression analysis, bootstrapping, structural equation modeling (SEM), and natural language processing (NLP). Conceptual overviews ( $n = 61$ ), mixed methods ( $n = 47$ ), and qualitative methods ( $n = 37$ ), such as case studies and thematic analyses, were also employed. Interestingly, 93 articles did not rely on specific theoretical frameworks, indicating a potential gap in the systematic application of established theories. However, the remaining 145 articles utilized a diverse array of 132 theories. Notably:

- The technology acceptance model (TAM) was the most frequently used theory ( $n = 9$ ), helping to understand how individuals accept and use new technologies (Davis, 1989; Marangunić & Granić, 2015).
- The stimulus-organism-response (SOR) theory appeared in five studies, explaining how environmental stimuli affects an individual's internal state and responses (Mehrabian & Russell, 1974).
- The unified theory of acceptance and use of technology (UTAUT) was also cited in five studies, offering a comprehensive framework for examining user acceptance of technology (Venkatesh et al., 2003).
- The resource-based view (RBV) theory (Barney & Arkan, 2005) and service-dominant logic (SDL) theory (Vargo & Lusch, 2017) were used five and four times, respectively, emphasizing the importance of internal resources and value co-creation in marketing.

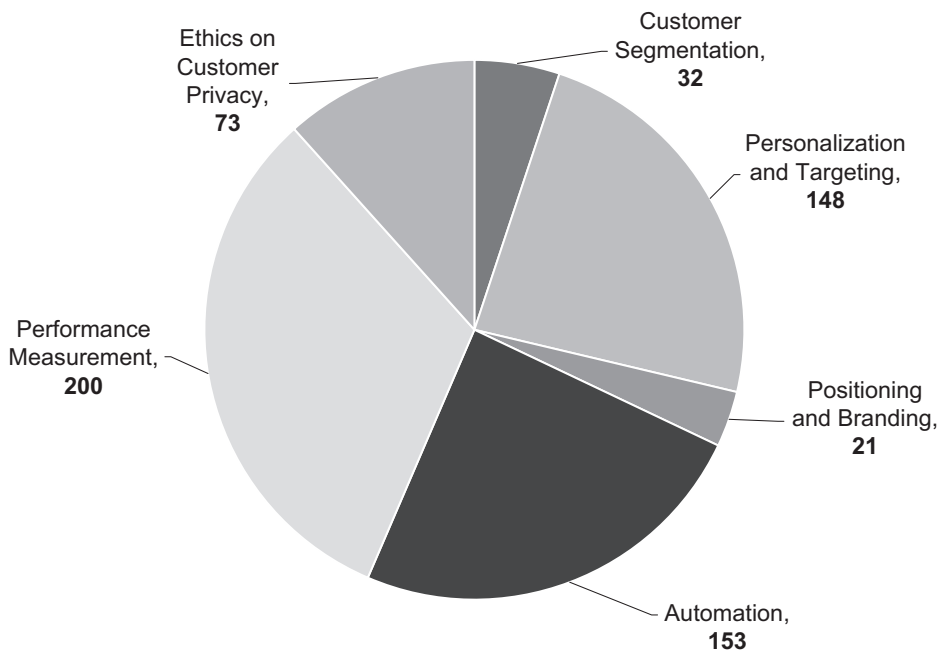
These theories provide valuable lenses to analyze AI-driven marketing strategies and underscore the need for theoretical grounding in future research.

## Results

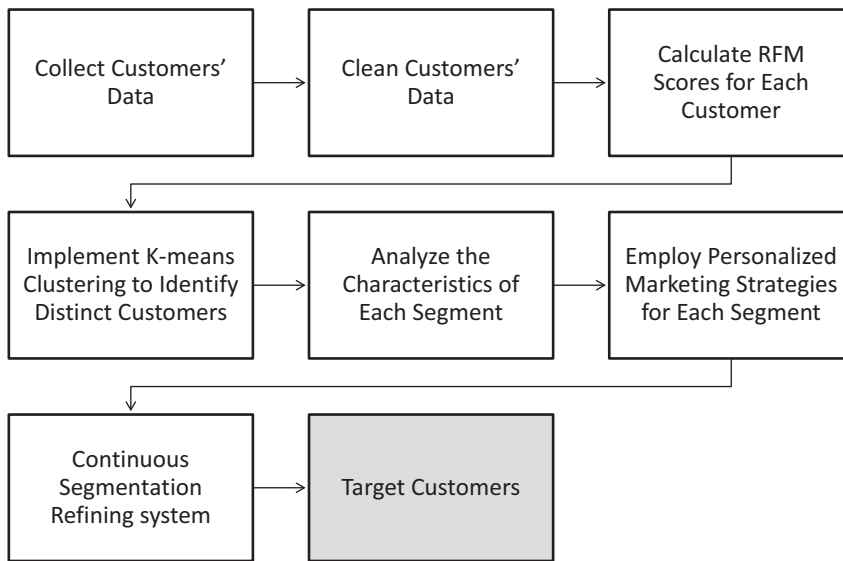
After thoroughly analyzing our studies, we identified six fields significantly impacted by AI. The most frequently examined area is Performance Measurement ( $n = 200$ ), indicating its critical role in assessing marketing strategies' effectiveness. Automation follows ( $n = 153$ ), highlighting AI's capacity to streamline and optimize marketing processes. Personalization and Targeting ( $n = 148$ ) underscore AI's ability to tailor marketing efforts to individual consumer preferences. Ethics on Customer Privacy ( $n = 73$ ) emphasize the growing concern over AI's impact on consumer data privacy. Customer Segmentation ( $n = 32$ ) shows AI's potential to divide a broad customer base into sub-groups for targeted marketing. Lastly, Positioning and Branding ( $n = 21$ ) reflect AI's influence on shaping and maintaining a brand's market position. These findings reveal the multifaceted impact of AI across various marketing domains, offering insights into areas for further exploration and implementation (see Figure 2.2).

### AI in Customer Segmentation

Artificial intelligence (AI) transforms how businesses segment their customers in marketing. Customer segmentation simply divides customers into groups based on behavior,



**FIGURE 2.2** The Themes Covered in Scholarly Research on the Topic of Marketing Strategy with Artificial Intelligence



**FIGURE 2.3** Diagram of AI Customer Segmentation

preferences, and demographics. AI enhances this process by using advanced algorithms to analyze large amounts of data, uncovering patterns humans might miss. For example, Hakami and Mahmoud (2022) used AI to analyze online reviews and accurately identify consumer interest in sustainable products with a 96.5% success rate. This allows companies to target their marketing more precisely and effectively. AI also helps businesses find niche markets and spot emerging trends by processing vast datasets. Basu et al. (2023) showed that combining big data with AI can identify unique customer groups, enabling personalized marketing strategies that engage customers better and use resources wisely. Tools like K-means clustering and recency-frequency-monetary (RFM) analysis categorize customers based on their purchasing behavior, supporting sustainable growth for startups (Kasem et al., 2024).

## CASE STUDY 2.1

### Amazon and Instagram Use Clustering

Companies like Instagram and Amazon use similar AI-driven methods to offer relevant suggestions, enhancing user engagement. They use the same customer segmentation methods to categorize their customers based on their behavior. For Amazon, this behavior will be assessed by customers' purchasing habits and purchasing

behavior, hence a typical RFM analysis to assign customers to specific segments based on their (1) Recency (When a customer purchased recently); (2) Frequency (What is each customer's purchasing time interval?); and (3) Monetary Value (How much money does the customer spend?). Instagram has a similar approach but complements it with users' reactions to and engagement with posts in order to recommend personalized content feeds, display targeted advertisement, and recommend products with higher purchase likelihood. Although their input data differ slightly, both companies resort to similar machine learning algorithms like K-means analysis to cluster customers based on similar behaviors and purchasing patterns to elevate the conversion rate of prospects into actual customers. Amazon's recommendation search engine has a great impact on the company's revenue since it forms about 35% of the company's overall sales. In fact, with a scoring system, companies can analyze their customers' habits and interactions, which help them to provide more targeted marketing strategies (Figure 2.3).

### DISCUSSION QUESTIONS

- 1 Evaluate the effectiveness of using RFM and K-means techniques in different industries, businesses, or even in business-to-business settings. Will they yield similar results?
- 2 What do you think about the limitations of these strategies?
- 3 How do you think the increasing use of AI and machine learning in customer segmentation will shape the future of personalized marketing and user experiences?

Beyond just numbers, AI can also consider psychological factors. Hermann (2023) explained that AI can group consumers based on their values, such as sustainability, allowing businesses to tailor their offerings to match customers' personal beliefs. Additionally, AI improves personalization by customizing experiences to individual preferences, making marketing efforts more engaging and effective (Gao et al., 2023; Krishen et al., 2021). In summary, AI significantly boosts customer segmentation by providing deeper insights, enabling personalized marketing, and improving overall business outcomes.

### Personalization and Targeting

Personalization and targeting are all about tailoring marketing efforts to individual customers based on their unique preferences and behaviors. AI enhances these processes by analyzing vast amounts of customer data to predict what each person might like, allowing businesses to create customized marketing strategies that boost engagement and satisfaction (Pereira et al., 2022; Stone et al., 2020). For example, machine learning (ML) tools in marketing strategy (MS) sift through extensive data to develop highly personalized approaches, making customers feel understood and valued (Miklosik et al., 2019).



Additionally, AI can assess consumer emotions, helping companies craft marketing messages that resonate on a deeper emotional level, leading to stronger connections and higher satisfaction (Malodia et al., 2023). AI-powered voice assistants like Siri or Alexa take personalization a step further by learning from your behavior and preferences to offer tailored recommendations, enhancing your overall experience and encouraging loyalty to the brand (Rawool et al., 2024).

## CASE STUDY 2.2

### Conversational AI Agents

Voice assistants like Apple's Siri, Amazon's Alexa, Google's Assistant, or Microsoft's Cortana support users in multiple ways. In addition to addressing users' requests, they use the large amounts of customers' voice data to recommend more relevant information and create more customized responses for each individual user. Notably, these assistants act as supportive data collectors for their parent companies' search engines. They transfer their users' current and past interactions seamlessly to enrich the knowledge of their systems for more accurate recommendations. For instance, if a user frequently asks his Siri voice assistant how to cook Indian foods, the voice assistant will be aware of the user's preferences and suggest relevant contents and products in Apple's Safari browser, based on curated information.

### DISCUSSION QUESTIONS

- 1 By increasing the personalization and precise targeting capabilities of AI-based voice assistants, what are the risks for consumer privacy?
- 2 How can businesses reassure customers that their data will be used for the sole purpose of improving marketing strategies and that there will be no misuse of gathered information?
- 3 How will voice assistants fare in comparison with other conversational AI agents such as ChatGPT?

Similarly, ML can predict what customers might do next, allowing advertisers to create relevant and engaging content that increases the chances of making a sale. An excellent real-life example is Netflix, which uses AI algorithms such as collaborative filtering and deep learning (DL) to analyze what you watch and recommend shows or movies you are likely to enjoy, keeping you engaged and satisfied with the service (Netflix, 2023; Shah et al., 2020).

In startups and small businesses, AI helps refine personalization by delivering precise, data-driven content that makes the customer journey smoother and more enjoyable, leading to higher engagement (De Mauro et al., 2022). In banking, AI-driven personalization analyzes your financial data to offer services that fit your needs, improving your satisfaction and attracting more users (Ho & Chow, 2023).

## Positioning and Branding

Positioning and branding involve defining how a company wants to be perceived in the market and building a strong brand identity. AI plays a strategic role here by leveraging a company's strengths and aligning them with valuable market assets like brand equity, the value a brand adds to a product or service (Varadarajan & Jayachandran, 1999). In today's fast-paced business environment, family businesses and small to medium-sized enterprises (SMEs) use AI-driven strategies to improve their market position and brand image. AI helps businesses differentiate themselves from competitors and sustain growth by enhancing market presence and creating new opportunities (Kim & Seo, 2023). AI tools like ChatGPT, Google Gemini, and Meta's LLaMA can quickly create high-quality text, images, or videos that perfectly match your brand's identity. This means marketers can produce impactful and diverse content faster than ever before.

## CASE STUDY 2.3

### Even Coca-Cola Uses Generative AI

Coca-Cola launched its "Create Real Magic" campaign, inviting artists to use generative AI to develop billboard visuals in major cities like New York and London. The company adopted an innovative approach by using AI image generation technology like OpenAI's DALL-E and asked users to create digital artworks considering the iconic Coca-Cola symbols to make deeper connections between the brand and users. By creating this campaign, Coca-Cola showed its democratic commitment for blending its heritage and innovation. In fact, this strategy helps maintain brand consistency while exploring new creative territories and, as a result, make more potential customers by using technology.

### DISCUSSION QUESTIONS

- 1 What are the effects of creating AI-based advertising campaigns on traditional marketing agencies? Is it a threat for a human-centered thinking approach?
- 2 How do these kinds of branding strategies impact on converting potential customers to actual customers?
- 3 How does Coca-Cola benefit from such a branding campaign?
- 4 How can other industries or businesses use AI technologies for their branding?

This real-world example shows how AI can turn marketing ideas into action, making branding more adaptable, cost-effective, and in tune with what audiences prefer (Cui et al., 2024; Heitmann, 2024). Also, by using AI tools like Midjourney alongside design methods like Shape Grammar (SG) and Kansei Engineering (KE), businesses can quickly generate valuable concepts (Wang et al., 2024). These tools help them create designs that reflect their brand's identity while catering to users' wants. For instance, NIU company, which is a Chinese multinational automobile manufacturer, used this AI-driven approach to design an electric moped specifically for female riders (Wang et al., 2024). They focused on making it stylish and user-friendly. Thanks to AI, they created different sketches that matched the brand's vibe and appealed to consumers' preferences. It shows how AI is not just a theory but a practical tool that is bridging the gap between branding ideas and real-world products (Wang et al., 2024).

In banking, AI tools help personalize financial services by suggesting tailored products, increasing customer engagement and brand preference (Ho & Chow, 2023). In retail, machine learning helps predict sales, manage inventory efficiently, and personalize customer experiences, all of which strengthen brand positioning and set companies apart from competitors (Wang et al., 2021). For instance, chatbots with a friendly, informal language style can make customers feel more connected to the brand, encouraging them to return and stay loyal (Hu & Pan, 2024; Li & Wang, 2023).

### AI-driven Marketing Automation

AI-driven marketing automation enhances customer engagement by automating marketing tasks and delivering personalized experiences at scale (Ciuchita et al., 2023; Kalwar, 2024; Wang, 2021). Automation facilitates repetitive processes and lets marketers focus on strategic planning (Umamaheswari, 2024). Also, AI-driven marketing automation drastically boosts user satisfaction and corporate revenue by optimizing the retail value chain, streamlining service delivery, and facilitating personalized shopping experiences through advanced AI technologies (Heins, 2023). Tools like HubSpot, Salesforce, and Mailchimp use AI to analyze customer behavior, predict trends, and tailor marketing messages, making campaigns more effective and efficient. For instance, a small e-commerce business used AI-powered recommendation engines to analyze customers' browsing and purchase patterns, leading to highly relevant product suggestions that drive higher engagement and sales (Fehrenbach et al., 2024). This approach increased sales by 25% within six months (Kedi et al., 2024). This real-life example illustrates how AI can streamline marketing operations, improve customer experiences, and drive sales. These factors reveal a seamless integration of AI tools with marketing for more efficient, targeted, and optimized customer service (Gkikas & Theodoridis, 2022).

AI-driven marketing automation also plays a crucial role in business-to-business (B2B) marketing by transforming big data into actionable insights. This capability streamlines customer profiling and predictive modeling processes, augmenting marketing effectiveness and enabling personalized, data-driven strategies (Bag et al., 2021; Moradi & Dass, 2022).

## CASE STUDY 2.4

### Audi and AI

Several researchers such as Leung et al. (2019) or even Saura et al. (2021), more recently, have reported how companies like Audi use AI to create personalized ads based on browsing behavior, significantly improving customer targeting and engagement. They demonstrate how Audi leverages data analytics to inform its marketing strategies and decisions. The company uses AI programmatic advertising to automate the buying and placement of ads in real time, to target ads for luxury vehicles at users who have shown interest in high-end products.

### DISCUSSION QUESTIONS

- 1 How does AI-driven automation affect customer trust and brand loyalty?
- 2 What challenges might automotive companies face when implementing AI for personalized advertising, and how can they address these issues?

This technology provides decision support with improved predictive accuracy and interpretability. AI automation tools to facilitate the MS process include, for instance, Zapier, one of the most advanced AI automation tools that can integrate and connect a wide range of platforms to boost automation speed and versatility (Prunty, 2024). Marketer Milk (2024) states that other AI automation tools enable companies and individuals to enhance MS goals. The list of AI and Online Resources at the end of this chapter provides a more comprehensive, although non-exhaustive, list of such tools and their applications for MS.

## Performance Measurement and Analytics

When applying AI in marketing strategies, one area stands out as the most researched: Performance measurement and analytics. This focus highlights how crucial AI has become for companies aiming to boost efficiency and analyze market trends to predict future growth. Researchers emphasize that AI tools are essential for providing insights that lead to smarter decisions and better strategic planning, ensuring ongoing business development (Bag et al., 2021). Companies can significantly enhance their performance through advanced measurement and analytics by harnessing big data-powered AI. This technology allows B2B marketers to tap into valuable customer, user, and market insights, enabling them to make well-informed decisions and refine their strategies (Rahman et al., 2023). For example, AI-based Customer Relationship Management systems in B2B firms improve

relationship performance by utilizing big data analytics, leading to better social sustainability and more efficient performance measurement (Mikalef et al., 2023).

Developing AI competencies in B2B marketing does not just stop at data collection—it also improves how organizations manage information, plan strategies, and implement marketing efforts. This holistic approach results in more effective performance measurement and analytics (Saura, 2021). Data science techniques such as clustering, association rule mining, and identifying predictive patterns help companies optimize their strategies and managers make smarter decisions (Gupta et al., 2021). Big data analytics play a pivotal role in enhancing marketing performance. They inform strategic planning and help optimize resources, pushing performance measurement and analytical capabilities to new heights (Wu & Monfort, 2023). AI-driven marketing strategies further boost company performance by enabling precise targeting, effective customer relationship management, and data-based decisions (Le et al., 2021). Research shows that incorporating AI into marketing strategies improves the accuracy of performance measurements, optimizes marketing decisions, and strengthens customer relationships (Al-Surmi et al., 2022).

In advertising, AI-powered programmatic approaches combine consumer insights with dynamic creative optimization, leading to more effective and targeted campaigns (B. Gao et al., 2023). Take ClearPoint Strategy, for instance, which uses AI to transform performance management by offering real-time feedback and predictive analytics. This innovation enhances strategic planning and reporting, aiding companies in making well-informed decisions (Gołąb-Andrzejak, 2023). Advances in AI for advertising also allow for precise performance measurement and analytics, improving ad targeting, personalization, and content creation. The result is more effective campaigns and a better return on investment (Middleton, 2024).

Real-world applications of AI in performance measurement are already making waves. Companies like Freeport-McMoRan leverage AI to merge real-time data with existing knowledge, dramatically improving operational efficiency and speeding up decision-making processes (McKinsey, 2024).

## CASE STUDY 2.5

### From Mining Copper to Mining Data

Freeport-McMoRan is a well-known American mining company with large-scale copper mines in North America, South America, and Indonesia. The company designed and executed the use of big data and AI models to optimize mill processing rates, which resulted in a 5% increase in copper production at their Bagdad, Arizona site. This program, which was called “Americas’ concentrator program,” not only improved the company’s operation efficiency and recovery rates but also reduced

the need for significant capital investments. The success at Bagdad led to the scaling of AI capabilities across other mines, unlocking substantial production increases and financial benefits.

### DISCUSSION QUESTIONS

- 1 How does the use of AI in performance analytics impact decision-making processes within industrial operations?
- 2 In what ways can AI uncover hidden patterns or anomalies in performance data that traditional analytics might miss, and how can companies capitalize on these insights?
- 3 What are the potential risks of algorithmic bias in AI-driven performance measurement systems?

### Ethics on Customers' Privacy

Ethical considerations in marketing, particularly regarding customer privacy, emphasize balancing business goals with moral obligations. According to Kamila and Jasrotia (2023), their bibliometric study highlights the necessity for organizations to integrate robust privacy practices into their strategies to maintain consumer trust and loyalty while assuring the responsible use of customer data. Many studies emphasize that transparency, data protection, and adherence to ethical standards are essential to fostering consumer trust and mitigating privacy risks associated with AI-driven marketing initiatives (Cloarec et al., 2024; Ziakis & Vlachopoulou, 2023).

In the financial services sector, integration of AI into MS necessitates addressing ethical concerns surrounding customer privacy. Increased data collection and analysis pose risks of misuse and loss of trust, making transparency and data safeguarding critical to maintaining ethical standards and fostering consumer confidence. Knowing that AI-driven marketing practices are fair, secure, and ethical is vital for protecting vulnerable customers from exploitation and guaranteeing responsible marketing practices (Feng et al., 2021; Mogaji et al., 2021; van Esch & Stewart Black, 2021).

A study on AI-generated storyboards for marketing underscores the importance of ethical practices in handling customer data, addressing biases, and protecting intellectual property to maintain consumer trust and compliance with privacy regulations (Chaisatitkul et al., 2024). The ethical implications of digital technologies on customer privacy highlight the need for robust regulatory frameworks and proactive firm responses to manage privacy tensions. The transformative privacy calculus explores the personalization-privacy paradox in MS and emphasizes the need for ethical practices to balance personalized experiences with robust privacy measures (Brock & Wangenheim, 2019; Quach et al., 2022).

## Future Trends

### Generative AI for Marketing

AI trends in MS suggest further transforming marketing methods and business models. The continued evolution of AI technologies, including generative AI and advanced ML models, will enable even more sophisticated marketing practices. Generative AI, for example, is already being used to automate the creation of various content types, such as product descriptions, reviews, images, and personalized recommendations (Davenport & Mittal, 2022). This technology streamlines e-commerce operations and allows businesses to efficiently manage extensive inventories and craft engaging content tailored to individual preferences. Future AI developments will likely focus on improving personalization and interactivity by providing consumers with more immersive and tailored experiences.

The rising investments in AI (Statista, 2024) confirm the orientation of businesses to deploy fully AI-integrated systems. AI's ability to analyze and predict consumer emotions will also significantly create emotionally resonant marketing strategies. AI-driven marketing automation will continue to optimize marketing processes, improve decision-making, and enable more accurate sales forecasting. These advancements will transform marketing methods and redefine business models by emphasizing data-driven decision-making and customer-centric strategies. As a great example, OpenAI's latest achievements, ChatGPT-4o and Google's Gemini 1.5, represent significant advancements in AI technology that can enhance MS efficiencies. ChatGPT-4o offers advanced natural language processing capabilities, enabling more sophisticated and intuitive user interactions. Similarly, Google's Gemini 1.5, with its enhanced data analytics and predictive modeling, can optimize ad placements, personalize marketing campaigns, and improve decision-making processes by analyzing vast datasets in real time. These technologies streamline marketing operations while allowing for more targeted and effective strategies, ultimately boosting efficiency and driving better business outcomes (Keary, 2024; Sarkhedi, 2024).

### Ethical Considerations in AI and Marketing Strategy

Ethical considerations and respect for privacy are crucial when integrating AI into marketing practices. As AI technologies become more prevalent, there is an increasing need to address ethical data privacy and security concerns. The integration of AI in MS involves extensive data collection and analysis, which poses risks of misuse and loss of consumer trust. Using psychographic and behavioral targeting in marketing, especially in political contexts, raises significant ethical concerns.

## CASE STUDY 2.6

### Cambridge Analytica Scandal

The Cambridge Analytica scandal occurred in 2018 and brought key ethical issues to the forefront, revealing how personal data could be exploited for political gains.

Cambridge Analytica harvested data from over 50 million Facebook profiles without user consent to create targeted political advertisements to sway voter opinions during events like the 2016 US presidential election and the Brexit referendum. This scandal highlighted how to use AI not only for understanding consumers' behavior but for manipulation and exploitation of individuals through deep psychological profiling without individuals' permission.

### DISCUSSION QUESTIONS

- 1 How can AI developers make sure that their technologies will be used ethically and responsibly?
- 2 How can authorities and lawmakers ensure that their standardized legal frameworks are followed by firms in online settings?
- 3 How can users protect themselves from such manipulations and data exploitation?

Another significant example was Amazon's AI recruiting tool in 2014, which was found to be biased against women. The tool, which was trained on historical recruitment data, favored male candidates over female ones, reflecting the gender biases in the data. Eventually, Amazon shut down the tool in 2015 and acknowledged the need for more diverse and unbiased training data to ensure fair decision-making processes (Dastin, 2018; Dilmegani, 2024).

Psychographic segmentation is a powerful marketing tool that can lead to ethical dilemmas when influencing political opinions or consumer behavior. It involves analyzing individuals' personality traits, values, attitudes, interests, and lifestyles to create highly targeted marketing messages (Gajanova et al., 2019). While this can enhance marketing effectiveness, it also raises questions about privacy invasion and the risk of manipulation (Tran, 2017). The ethical use of AI in marketing must also address the spread of misinformation. AI algorithms can inadvertently amplify false or misleading information, contributing to the spread of "fake news" (Akhtar et al., 2023). This is particularly concerning in political marketing, where misinformation can have far-reaching consequences on democratic processes. Marketers must be vigilant in ensuring that AI-driven content generation and distribution do not contribute to the spread of false information (Kenan, 2023).

Marketers and organizations should implement transparent data collection and usage policies to address these ethical challenges. Also, explicit consent must be obtained from users for data collection and usage, especially for psychographic profiling. Ultimately, larger investments are needed to develop AI systems with built-in safeguards and protocols against bias and discrimination to protect users and respect their privacy (Kenan, 2023; Kumar & Suthar, 2024).



## CHAPTER SUMMARY

This systematic literature review explores how AI is transforming marketing strategies. Topical research was very scarce before 2017 and started to boom afterward. Research is published across a fair share of academic outlets, especially the *Journal of Business Research*, the *Journal of the Academy of Marketing Science*, *Decision Support Systems*, and *Psychology & Marketing*, while many journals do not specialize in marketing. The research also concentrates in the United States, China, the United Kingdom, and India (59% of total research); involves mostly quantitative methods (59%); and relies on diverse theoretical frameworks, the most frequent being TAM or UTAUT, but also hosts of theories, models, and frameworks in data analytics (e.g., Bayesian network theory, graph pattern mining theory). This finding reflects AI's interdisciplinary nature and its multifaceted role in marketing. The most frequent keywords suggesting the most discussed topics include machine learning, deep learning, big data analytics, sentiment analysis, blockchain, influencer marketing, AI adoption, ethics, anthropomorphism, and customer engagement.

The most frequent topics in MS with AI include performance measurement, automation, personalization, and targeting. Ethics on customer privacy are less prevalent but more popular than customer segmentation, positioning, and branding. AI technologies like ML, DL, and Big Data Analytics enhance efficiency, predict customer behavior, and optimize strategies. Companies like Amazon and Netflix exemplify AI's impact on customer engagement and satisfaction. However, ethical concerns around data privacy and security must be addressed to maintain consumer trust, and additional research is needed in this comparatively under-researched area. Other topics of future importance include advancements in predictive analytics, enhanced personalization, integration with AR/VR, and, more broadly, the metaverse, promising deeper consumer insights and more meaningful engagement.

### KEY TERMS

- **AI Marketing:** The use of artificial intelligence technologies to make automated decisions based on data collection, data analysis, and additional observations of audience or economic trends that may impact marketing efforts.
- **AI Marketing Strategy:** The systematic integration of artificial intelligence technologies and tools into an organization's marketing processes and decision-making to enhance the efficiency, personalization, and effectiveness of marketing efforts.
- **Artificial Intelligence (AI):** The technology that enables computers and machines to simulate human intelligence and problem-solving capabilities.
- **E-commerce:** E-commerce is when individuals and companies buy or sell goods and services over the Internet. E-commerce can happen through a website, smartphone app, social media platform, online marketplace, or other sales platform.
- **Machine Learning (ML):** A method of data analysis that allows a system to learn over time by analyzing patterns from prior experience.

- **Marketing Strategy:** Refers to a business’s overall plan to convince customers to buy its products or services. A marketing strategy determines how to reach prospective consumers and turn them into customers. It contains the company’s value proposition, key brand messaging, data on target customer demographics, and other high-level elements.

### DISCUSSION QUESTIONS

- 1 How do advanced marketing strategies with the help of AI change traditional marketing methods? How would you evaluate the consequences of using AI in marketing strategy in both a short-term and a long-term period?
- 2 Which one of the six mentioned key factors related to AI impacts on marketing strategies may exert the most influence on consumers’ behavior in the next decade? Why?
- 3 Discuss the conflicts between AI personalization features for targeting users and concerns regarding individuals’ privacy concerns? What strategies can institutions implement to balance these priorities effectively?
- 4 What additional measures could be taken to protect individuals from personal data leakage? Also, how can one increase ethical practices in AI and marketing?
- 5 How can companies make sure that their AI strategies do not breach consumer trust? How can they reinforce consumer or user trust using AI?

**TABLE 2.1** AI and Online Resources

Resource	URL	Description
<b>ChatGPT</b>	<a href="https://chatgpt.com/">https://chatgpt.com/</a>	AI-powered conversational tool for content creation and customer engagement. Generates high-quality content, assists in brainstorming, and can be used for chatbots to improve customer interactions.
<b>HubSpot</b>	<a href="http://www.hubspot.com/">www.hubspot.com/</a>	CRM platform designed to unify marketing, sales, and service tools. Assists with personalized content creation, lead nurturing, and customer journey analytics, enabling targeted campaigns and streamlined marketing efforts.
<b>Mailchimp</b>	<a href="https://mailchimp.com/">https://mailchimp.com/</a>	Marketing automation platform for email marketing. Optimize email campaigns and offer creative design tools.
<b>Jasper AI</b>	<a href="http://www.jasper.ai/">www.jasper.ai/</a>	AI content creation tool for writing and editing. Helps create diverse marketing content efficiently, maintaining brand voice across channels.

(Continued)

TABLE 2.1 (Continued)

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Surfer SEO</b>	<a href="https://surferseo.com/">https://surferseo.com/</a>	Content optimization tool for improving SEO rankings. Analyzes and optimizes content for better search engine performance, integrating with other tools.
<b>Midjourney or Lexica Art</b>	<a href="https://www.midjourney.com">www.midjourney.com</a> <a href="https://lexica.art/">https://lexica.art/</a>	AI image generator for creating realistic images. Produces high-quality visuals for marketing materials, ensuring brand consistency.
<b>ClickFunnels</b>	<a href="https://www.clickfunnels.com/">www.clickfunnels.com/</a>	Sales funnel builder with AI-powered features. Streamlines the creation of marketing funnels, optimizing conversion rates.
<b>ClickUp</b>	<a href="https://clickup.com/">https://clickup.com/</a>	AI-enhanced project management and productivity tool. Helps marketing teams organize campaigns, tasks, and workflows more efficiently.
<b>AdCreative AI</b>	<a href="https://www.adcreative.ai/">www.adcreative.ai/</a>	AI-powered ad creative generation tool. Automates the creation of ad visuals and copy, improving ad performance.
<b>Brand24</b>	<a href="https://brand24.com/">https://brand24.com/</a>	AI-powered social listening tool for monitoring online presence. Tracks brand mentions across social media, news, blogs, and more, providing real-time insights and sentiment analysis to manage brand reputation and engagement.
<b>Zapier</b>	<a href="https://zapier.com/">https://zapier.com/</a>	Automation tool for connecting apps. Automates workflows by connecting different marketing tools and apps.
<b>Heap AI</b>	<a href="https://www.heap.io/">www.heap.io/</a>	Digital insights platform for understanding customer digital experience. Provides comprehensive data on user behavior, identifies friction points, and offers actionable insights to improve conversion, retention, and customer delight.
<b>Highlight.io</b>	<a href="https://www.highlight.io/">www.highlight.io/</a>	Tool for analyzing digital experiences. Provides insights into user behavior to improve website and app experiences.
<b>Hootsuite</b>	<a href="https://www.hootsuite.com/">www.hootsuite.com/</a>	Social media management platform with AI-powered features. Offers AI-driven content creation, scheduling, analytics, and social listening to streamline social media marketing efforts and improve engagement.
<b>Chatfuel</b>	<a href="https://chatfuel.com/">https://chatfuel.com/</a>	Chatbot creation platform. Creates AI-powered chatbots for customer engagement and support.

TABLE 2.1 (Continued)

Resource	URL	Description
<b>Celonis</b>	<a href="http://www.celonis.com/">www.celonis.com/</a>	AI-enhanced process mining and intelligence platform. Analyzes business processes to identify inefficiencies, provides AI-driven insights for optimization, and enhances decision-making in marketing operations and customer journey mapping.
<b>Albert.ai</b>	<a href="https://albert.ai/">https://albert.ai/</a>	Digital advertising optimization tool. Uses AI to optimize ad campaigns and improve ROI.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



FIGURE 2.4 QR Code to Online Support Material

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## PART II

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# AI Tools and Applications in Marketing

Chapter 3 investigates AI and its interplay with Integrated Marketing Communications (IMC), encompassing multiple communication channels. It includes a discussion on how to effectively integrate these technologies into IMC pathways, such as advertising, public relations, sales promotion, and brand communication.

Chapter 4 explores the impact of AI on the marketing of goods and services in the digital realm, focusing on its ability to streamline operations by automating processes and delivering personalized marketing solutions. Through AI integration, e-commerce companies can effectively eliminate redundancies and enhance their marketing efforts to tailor offerings to individual customers.

Chapter 5 presents an overview of the integration of AI and its current applications in branding. This chapter uses real-world examples to show how consumers interact with technology like algorithms, social robots, automation, and digital tools when engaging with brands.

Chapter 6 highlights the impact of AI on international marketing. As internet-enabled technologies revolutionize the global market landscape, AI emerges as a pivotal tool, redefining traditional marketing paradigms and offering new opportunities and challenges.

Chapter 7 builds on academic and managerial literature on AI integration in sales. Frontline sales roles are crucial for customer acquisition, retention, and growth through relationship building, and advances in AI are enhancing how sales representatives interact with customers.

Chapter 8 investigates the transformative impact of AI on the new product development (NPD) process, emphasizing the paradigm shift toward faster, more efficient, and innovative product creation. This chapter differentiates between two AI concepts in the NPD process, “innovate with AI” and “innovate for AI.”



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# Synergizing AI and Integrated Marketing Communications

*Handan Derya Ercan*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Comprehend the concept and evolution of IMC.
- 2 Identify the potential organizational barriers and understand the role of technological capability as a vital driver for an effective IMC implementation.
- 3 Analyze AI impact, benefits, and applications through the AI-Enabled Marketing Communication Mix: 1) Advertising, 2) public relations and publicity, 3) brand visibility, 4) digital media platforms, 5) sales promotion, and 6) personal contact.
- 4 Evaluate the opportunities and challenges awaiting new marketing practitioners by using AI.
- 5 Explore practical implications of adopting AI-enabled marketing communication within organizations.

## INTRODUCTION

### Evolution of IMC

Integrated Marketing Communication (IMC) emerged in the late 1980s as a response to traditional transaction-based marketing, focusing on communication within relationship marketing. Don Schultz, a key figure in IMC theory, formally introduced the concept, advocating for a comprehensive approach that utilizes multiple communication channels

to foster strong customer relationships (Schultz, 1992). The foundational ideas were published in the 1993 book *Integrated Marketing Communications* by Schultz, Tannenbaum, and Lauterborn (Kitchen & Burgmann, 2010). Early discussions centered on defining IMC, its conceptual framework, process view (Schultz & Kitchen, 1997; Duncan & Everett, 1993; Kliatchko, 2002), and shift from tactics to strategic focus (Schultz & Schultz, 1998).

IMC emphasizes “delivering the right message to the correct audience through appropriate channels at the right time” (Broderick & Pickton, 2005, p. 6), ensuring a seamless message transmission across various channels. The IMC process requires meticulous management across all phases, from planning to evaluation. Eventually, developing IMC programs aims to prioritize internal and external target audiences throughout all phases, including objective setting, strategy formulation, tactical message development, media planning, delivery, and campaign evaluation, with a focus on addressing customer and stakeholder needs through sustainable and profitable relationships (Kliatchko, 2005).

With advancements in technology, IMC has evolved as consumers engage more with brands and other consumers. User-generated content has increasingly influenced the nature and strength of brand communication. This shift has led to “interactive IMC” blending new media with database marketing (Peltier et al., 2003).

The conceptualization of IMC has expanded from “concept” to “process” and then to “capability,” encompassing organization-wide involvement (Kliatchko & Schultz, 2014; Luxton et al., 2017; Porcu et al., 2017).

IMC is now viewed as a collaborative process that integrates organizational, analytical, and communication activities to ensure ongoing dialogue and consistent messaging across channels aimed at building sustainable and valuable relationships (Porcu et al., 2019). This holistic approach underscores strategic consistency, ensuring a unified message across IMC channels and interactions between employees and customers that promotes synergy (Schultz, 2018).

Evaluating the IMC process is vital for sustaining outcomes. Reinold and Tropp (2012) found that the effectiveness of total brand touchpoints and brand content determines IMC effectiveness. Click-through rates, convergence metrics, and zero-based budgeting measure IMC effectiveness, making testing and optimization integral to its practice since the introduction of the Return on Communication Investment (ROCI) metric by Schultz and Schultz (2004).

As IMC has evolved to meet the demands of a rapidly changing market landscape, it has become imperative for organizations to navigate the complexities of communication across various channels. However, this evolution is not without challenges. Despite advancements in strategies and technologies, several barriers impede the effective implementation of IMC. Understanding these obstacles is vital for fully leveraging the potential of integrated communication strategy and ensuring that organizational objectives are met in today’s dynamic environment.

## Barriers of IMC

Common barriers to IMC include staffing and budget constraints, lack of departmental coordination, confusion about roles, and organizational silos (Ots & Nyilasy, 2015). Organizational silos are particularly problematic, hindering marketers’ ability to deliver cohesive messages and manage communication priorities across channels effectively (Cao, 2014). To address this, Payne et al. (2017) proposed an omnichannel IMC framework to enhance communication synergies and customer engagement.

Additional challenges include inadequate internal coordination and role confusion. Implementing a Responsibility Assignment Matrix (showing RACI—Responsible, Accountable, Consulted, and Informed roles) clarifies team members' roles and responsibilities, ensuring awareness of duties and improving overall IMC processes.

A critical issue is updating IMC models to reflect technological advancements. Earlier IMC frameworks partly addressed technological aspects (Kitchen et al., 2004), such as Kitchen and Schultz's (2001) four-stage IMC implementation model, promoting information technology use for global customer databases and Kliatchko's (2008) extended IMC concept including the integration of technology as one of the organizational IMC levels. Kliatchko (2008) contended technology provides greater capabilities for organizations to get to know, understand, and better identify profitable and relevant customers by building and managing databases that contain empirical data. However, recent literature indicates a gap in incorporating digital and social media, big data, and analytics into IMC models (Keller, 2016; Kerr et al., 2023). Addressing this gap is essential for developing comprehensive and up-to-date IMC strategies. The following section will explore the impact of technology, particularly artificial intelligence, on IMC evolution.

## **Technology Adaptation—The Vital Driver of IMC**

Šerić (2018) reviewed empirical studies from 2000 to 2015 and identified five critical areas of IMC research: Implementation, impact, perception, measurement, and relationship with technology. Luck et al. (2010) highlighted social media as a revolutionary force in the marketplace, emphasizing its capacities for personalization and interactivity—both essential for effective IMC campaigns. While personalization tailors messages to consumers' needs and interests, interactivity fosters communication between brands and consumers, providing valuable feedback.

The rise of AI has further enhanced the IMC process's effectiveness. Advanced technologies enable comprehensive planning and control, providing IMC professionals with tools to engage customers more effectively. For instance, user-generated content on social media offers valuable insights for marketing strategies.

Technology has improved ad targeting through real-time data and programmatic advertising, which automates buying and selling media space, enhancing marketing communication budgets (Malthouse et al., 2018). Building on Luxton et al.'s (2017) concept of IMC as an organizational capability, Kerr et al. (2023) developed a framework that underscores the significance of programmatic advertising. Programmatic advertising involves automating the purchase and sale of ad space on digital platforms, using machine learning algorithms to improve ad performance and optimize marketing communication budgets. AI's influence extends beyond programmatic advertising, impacting various components of IMC and reinforcing its role as a critical capability in modern marketing strategies.

To summarize, the integration of technological advancements into IMC practices is pivotal for optimizing communication strategies and enhancing overall marketing effectiveness. The integration of adtech and martech tools, social media analytics, and programmatic advertising powered by AI demonstrates how these innovations can improve personalization, interactivity, and campaign efficiency. As IMC evolves, the role of AI becomes increasingly central in shaping effective marketing communication strategies. Its impact will be further discussed in the next section.



## THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INTEGRATED MARKETING COMMUNICATIONS

IMC is a practical discipline, and this section focuses on AI impact, benefits, and applications through the AI-Enabled Marketing Communication Mix. Given that advertising is a foundational element of any IMC plan, this part will further examine AI's role within advertising processes. As AI is defined and discussed in many academic disciplines, we aim to first start with a common understanding.

AI is "a system's ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation" (Haenlein & Kaplan, 2019, p. 1). AI-driven tools and services are progressively mimicking human problem-solving and decision-making capabilities. AI technology enables "the interaction of computer hardware, software, systems, processes, and interfaces that replicate human functions, behavior, abilities, and communication" (Juska, 2022, p. 3). Recently, the rapid advancement of this technology has been fueled by increased computing power, the widespread availability of big data at reduced costs, and significant improvements in machine learning algorithms (Huang & Rust, 2021).

AI encompasses diverse technologies, including software applications like voice assistants, image recognition systems, search engines, and hardware devices such as advanced robots, autonomous vehicles, and drones. These innovations signify AI's expanding influence across fields, including marketing. Given the expansive role of AI across various marketing applications, its integration into IMC offers a more focused avenue for leveraging these advancements.

Within the IMC framework, AI offers transformative opportunities. By enhancing data analysis and personalization capabilities, AI tools enable more effective and targeted communication strategies. This integration allows for a deeper understanding of consumer behavior patterns and improves the efficiency of marketing communications.

In designing IMC programs, marketers have access to numerous AI-powered marketing platforms and tools to convey their brand messages and perform targeted campaigns effectively. The primary goal remains to reach the target audience with compelling content while maintaining positive relationships. Traditionally, mass media channels offered a straightforward means of reaching audiences and persuading them to choose a brand. However, the digital advertising landscape has shifted dramatically. Consumers now have greater control over the media they consume, the brands and influencers they follow, and how they interact with brands. This evolution has led to a more fragmented attention span, often due to multitasking, resulting in partial engagement with content.

With the increasing number of channels and messages, communication complexity has increased, including not only firm-to-consumer interactions but also consumer-to-firm, consumer-to-consumer, and consumer-about-firm relations (Batra & Keller, 2016). Brands should engage with their target audience in ways and channels they prefer, gaining insights into their personalities and media consumption habits. AI enables marketers to achieve a higher degree of personalization in message content, timing, and location to attract the attention of the audience surrounded by numerous messages targeting them. This advancement utilizes diverse media types to meet specific communication objectives.

IMC has evolved to reflect technological changes, consumer behavior, and marketing strategies. The traditional elements of the IMC mix, including advertising and public

Advertising	Public Relations and Publicity	Brand Visibility
Digital Media Platforms	Sales Promotion	Personal Contact

**FIGURE 3.1** IMC Pathways for Brand Messages and Content

relations, have expanded to incorporate digital and interactive components. Referring to the classification of Juska (2022), marketing communication messages and brand promises are delivered through six key functional channels: Advertising, public relations and publicity, brand visibility, digital media platforms, sales promotion, and personal interactions. AI-powered approaches significantly impact and enhance the effectiveness of these pathways, improving IMC performance metrics.

The following sections will explore how AI supports brands in delivering their messages more effectively and creatively through these various communication pathways. By leveraging AI technologies, brands can tailor their strategies to better engage with their target audience and accomplish their marketing communication objectives.

### Enhancing IMC Through AI-Enabled Advertising

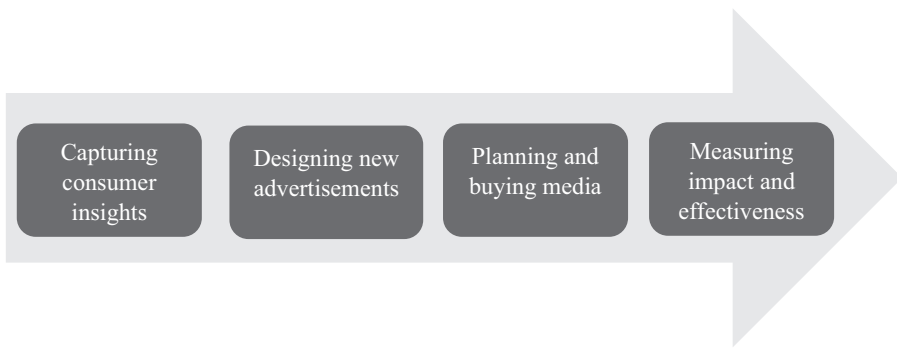
Brands increasingly leverage their own media channels, such as websites and social platforms. They earn media exposure through publicity and electronic word-of-mouth (eWOM), which is shared experiences, opinions, and recommendations of audience about the firm's products and brands online (Lovett & Staelin, 2016; Araujo et al., 2020). Despite this shift, paid media plays a significant role in IMC strategies. According to the Salesforce report (2022), paid advertising remains a significant component of marketing budgets, accounting for 18% of business-to-consumer (B2C) and 16% of business-to-business (B2B) allocations.

AI algorithms have not replaced marketing communication or creative agency professionals at strategic and tactical levels, yet. Instead, intelligent AI agents and tools increasingly augment their creative and routine tasks across advertising processes. For example, in campaign planning and IMC development, AI tools can assist marketers by capturing consumer insights and supporting them by measuring the overall impact and effectiveness of the marketing communication plan.

The impact of AI technology and its applications is thoroughly examined in the four main advertising processes outlined in Qin and Jiang (2019), discussed in the following sections.

#### Capturing Consumer Insights

Marketers should define their target market audience with buyer personas by channel, including their personalities, pain points, needs, and media consumption habits. Social listening is a way to be aware of this information and understand the impact of their brands on the market, as well as their perceptions and insights of the audience. Learning



**FIGURE 3.2** Advertising Processes

customer behavioral patterns and capturing their insights are essential enablers of an engaging advertising campaign. AI has significantly transformed the advertising landscape through advanced techniques such as machine learning (ML) (Viktoratos & Tsadiras, 2021). Machine learning algorithms aggregate and analyze consumer data from diverse sources, gaining insights into user demographics, preferences, and online behavioral patterns such as shared opinions, searched items, likes, dislikes, and frequently visited sites.

Machine learning algorithms train models capable of understanding and generating human language. By providing the algorithms and methodologies that perform a wide range of language-related tasks, ML is an essential enabler of natural language processing (NLP), which focuses on the interaction between machine and human language. NLP enables systems to understand, interpret, and generate human language, thereby supporting a wide range of advertising applications, including chatbots, personalized content creation, sentiment analysis, and voice-activated search.

Text mining, which is a subset of NLP, is used to extract meaningful information from unstructured text data. It involves preprocessing tasks such as discovering patterns, summarizing, and categorizing large volumes of textual information before applying mining algorithms and deeper NLP techniques. These applications are valuable for developing strategies, planning new products, and creating targeted campaigns that enhance IMC plans.

After a new product launch, brand, or sales campaign, marketers would seek to get the reaction of their audience. Customer emotional insights can be collected through AI-enabled applications. Sentiment analysis is a specific application within NLP and text mining, which is utilized on social media data, and Generative AI outputs focus on determining the emotional tone behind the text. It aims to classify text as expressing positive, negative, or neutral sentiments. Sentiment analysis can yield valuable insights for strategy setting and measuring campaign effectiveness.

To summarize, machine learning algorithms, predictive analysis, computational NLP techniques, and related applications empower social listening, grasping consumer insights, and guiding subsequent advertising efforts, including ad design, content generation, media planning, and efficiency measurement. As the advertising field evolves, AI's role in crafting new advertisements becomes increasingly prominent. The following section will discuss how these AI-driven innovations reshape advertisement development, enhancing relevance, interactivity, and impact through advanced personalization techniques.

## Designing New Advertisements

Creating an ad involves designing the ad image and crafting the ad message content. Designing both the image and content tailored to individual web users is increasingly feasible through AI technology. By analyzing digital data through web and text mining techniques, personalized advertising can be enabled. Personalized advertising is “strategic creation, modification, and adaptation of content and distribution to optimize the fit with personal characteristics, interests, preferences, communication styles, and behaviors” (Bol et al., 2018, p. 373). Adaptation of content and images effortlessly creates an opportunity to generate millions of individualized ads of the brands for special occasions like the Christmas period in a very short time.

Computer vision and deep learning algorithms have also made significant ad creation and copywriting strides. Computer vision techniques allow machines to recognize and interpret objects, scenes, and actions within images and videos. This sub-field of AI encompasses a variety of applications, including image classification (identifying objects within images), object detection (locating specific items in visual data), visual tracking (monitoring the movement of objects), text recognition (extracting text from images), and facial recognition (identifying and verifying individuals). Marketers increasingly utilize computer vision applications for visual ad creation and effectiveness testing. For example, automated scene analysis aids in crafting compelling visuals, while facial emotion detection evaluates the emotional impact of display or video ads on viewers and eye tracking measures ad content perception (Sharakhina et al., 2023). These methods offer advantages over traditional focus groups, such as greater efficiency and data precision. However, they also face challenges, including technical limitations, implementation complexity, and ethical concerns about data privacy and interpretation. Additionally, text recognition combined with computer vision helps detect mismatches between text and images, ensuring that ads are contextually relevant to individual web users (Ha et al., 2020).

Building on deep learning algorithms and transformational language models, Generative AI (Gen AI) technology transforms the advertising and content creation processes with various emerging tools and applications. GenAI tools play a crucial role in helping creative teams produce a variety of rich advertising content by processing large volumes of data and information (Wiredu, 2023; Zhang et al., 2023). Feeding the tools with well-prepared prompts, they can suggest headlines and adjust the tone of communications. However, relying solely on AI can sometimes lead to accuracy problems and generate content that is illogical or nonsensical (Dwivedi et al., 2024).

Considering high-budget advertising productions, AI assistance presents a huge potential to reduce production costs in IMC budgets. For instance, creating advertisement videos has traditionally required intensive labor and high costs, involving teams of artists, directors, editors, and musicians for scriptwriting and production. Gen AI-enabled technological tools, when prompted meticulously, can assist with screenwriting, character development, set and décor design, and scene descriptions. Initially, AI generates a script based on a given brief, which the brand and creative team reviews and revises. AI can create detailed character backstories, propose alternative sets, and provide scene descriptions. Subsequently, the script can be input into a video creation app where AI synthesizes text and images to generate motion capture videos. The authenticity of the creative process, the type of the product advertised (hedonic or utilitarian), ad appeal (emotional or rational), and targeted segments influence how extensively AI can be integrated into ad creation and production (Bakpayev

et al., 2022). For instance, using human artists rather than AI-generated characters is crucial for conveying emotional messages vs cognitive messages. Hedonic products often require a creative approach, while utilitarian products may also benefit from clear and straightforward communication. AI-generated ads may struggle to match the authenticity and originality of human creativity. In brand image campaigns, building relationships and trust with the audience may outweigh the emphasis on IMC budget efficiency and cost-cutting.

Consequently, the application of AI in advertising continues to evolve, offering powerful tools for ad image, sound and content creation, ad video production, and measuring ad perception and effectiveness. Yet, it is crucial to remain aware of the limitations and ensure that AI complements rather than replaces human creativity. Despite these technological strides, AI's role in creative processes remains supportive rather than fully autonomous, requiring human oversight to ensure the quality and authenticity of the final output. Furthermore, brand development mostly necessitates original creative works of human emotional intelligence. AI tools can augment the process and enhance the repurposing and adaptation of original creatives for tailored ads across various platforms. Human oversight and intervention are necessary to prevent brands from mismatches.

## Planning and Buying Media

The third advertising process, planning and buying media, is one of the processes in which AI usage yields significant efficiency. There is a shift from traditional media planning to communication planning and consumer engagement (Kelley et al., 2022). Brands are increasingly focusing on their owned and shared media assets rather than solely investing in traditional paid media. Digital media, social media, and in-store media gain importance in delivering communication messages. AI algorithms provide efficiency for paid media budgets through programmatic advertising.

Traditional methods of purchasing ad space, which relied on negotiations between media planners and platform owners, have primarily been replaced by programmatic advertising. Using data-driven insights, programmatic algorithms utilize real-time bidding to display ads to the most relevant audiences. In competitive situations where several brands compete for the same user profile, higher bids can increase ad placement revenue for the hosting website (Kerr et al., 2023). The main advantages of programmatic advertising include large-scale personalization, real-time targeting, and cost efficiency (Chen et al., 2019).

AI algorithms learn from mistakes, uncover insights, and play a vital role in real-time precise targeting and personalization. Data analysts extract textual information from various sources, such as websites and mobile applications. Each user is represented as a persona that reflects their demographic characteristics through keywords related to their interests, search items, location, gender, and preferences. Algorithms utilize keyword matching to select the most suitable advertisements based on user persona. The top-ranked (best match) advertisements are shown to specific personas; if clicked, they maintain high visibility, while less engaging ads are moved to lower positions. Additionally, algorithms allow for real-time adjustments in ad placements based on user interaction, ensuring that advertisements remain relevant and tailored to the audience's current interests. This real-time adjustment based on user interactions improves the effectiveness of advertising campaigns and overall engagement rates. By continuously analyzing user interactions and updating

profiles, this system facilitates more precise and effective advertising strategies, ensuring users receive content relevant to their interests and enhancing engagement.

### CASE STUDY 3.1

#### The *Economist's* Programmatic Advertising Campaign

According to smartyads.com, the *Economist* newspaper used programmatic advertising targeting a diverse audience of 650,000 individuals. The objective was to effectively connect with the right customers by delivering relevant content in strategically chosen online spaces. Digital display ads were placed next to articles that aligned with the interests of their target audience, ensuring visibility. The campaign utilized a budget of £1.2 million, achieving a remarkable return on investment (ROI) of 10:1 and reaching significant effectiveness in the intended audience (Kovalenko, 2023).

#### DISCUSSION QUESTIONS

- 1 How did placing ads next to related articles likely influence the effectiveness of The *Economist's* campaign? What might this placement suggest about the relationship between ad context and user engagement?
- 2 The *Economist* targeted a diverse audience of 650,000. What challenges might arise when trying to appeal to such a broad audience, and how could these be mitigated in a programmatic campaign?
- 3 The strategy emphasized engaging users on platforms they already use. What are some potential advantages and risks of focusing advertising efforts on familiar user platforms?
- 4 How should brands assess the scalability of a similar campaign if they have a smaller budget but want a similar impact?

On the other side, programmatic targeting of already loyal customers or brand website visitors for ad exposure may generate exaggerated ad effectiveness rates. Retargeting campaigns may not always lead to the desired results due to various factors, such as ad fraud, bots collecting cookies, and excessive retargeting with the wrong strategy. Although AI-driven ad management identifies the optimum demographics and the most suitable platform for outreach (Simonsen, 2022), advertisers and media agencies should collaboratively set audience selection strategies to determine the most efficient group of users to achieve higher budget efficiency.

Consequently, automation of the media planning process through programmatic ad management systems not only enhances the targeted ad delivery process but also facilitates it by managing complex and rapidly changing performance data. This capability enables AI to overcome the limitations faced by human media planners, optimizing the

allocation of advertising resources and enhancing the overall effectiveness of IMC campaigns. Yet, marketing practitioners and brand owners should closely monitor the process and take corrective actions according to their brand priorities.

### Measuring Impact and Effectiveness

This final stage of the advertising process involves assessing the outcomes of different advertising actions and the overall implementation of IMC. At the beginning of an IMC campaign, the overarching goals must be specific, measurable, attainable, relevant, time-bound (SMART); thus effectiveness can be measured by key performance indicators (KPIs). KPIs and related metrics for a digital advertising campaign might be as follows: Traffic/reach (page views by channel and source), engagement (average time on page), impact (click-through rate, conversion rate), sentiment (shares, positive, negative, neutral comments), lead generation (total leads), sales (lead conversion rate, customer purchases). AI algorithms, for instance, Google's machine learning tool, Google Analytics, provide customer-centric measurement and improvements on ROI. Through these analyses, marketers can identify which campaigns resonate with their audience and identify areas that require performance optimization.

Emerging techniques in neuroscience, including electroencephalography, eye tracking, and facial coding, are enhancing the ability to identify factors influencing consumer acceptance of advertisements and improve efficiency. For instance, AI-based face-tracking technologies analyze visual advertising messages to calibrate the length and attractiveness of ads in relation to media buying budgets and click-through intentions (Sharakhina et al., 2023). This enhances advertising effectiveness by aligning with media buying constraints and audience engagement metrics.

Furthermore, AI solutions help identify patterns in viewers' responses to video content. A mixed-method study evaluating advertisement effectiveness based on AI-predicted personality traits highlights the potential of AI in tailoring ads to individual preferences (Shumanov et al., 2022).

In sum, AI's integration into advertising processes marks a significant advancement in measuring and optimizing campaign effectiveness. By leveraging sophisticated algorithms and real-time data, AI facilitates a more nuanced understanding of consumer behavior and enhances the efficiency of media buying strategies. As technology continues to evolve, ongoing research and development will further refine AI's capabilities, driving innovations in advertising effectiveness and resource management.

### Leveraging AI Technologies in Public Relations and Publicity

In this subsection, the role of AI in public relations (PR) and publicity, another fundamental component of the IMC mix, is examined. PR and publicity have key roles in effective marketing communication and are vital for corporate communication. Ledingham and Bruning (2000) contend that overall relationship management is within the broader definition of public relations. Brands cultivate relationships by guiding customers through their journey across omnichannel experiences (Lemon & Verhoef, 2016). They actively manage their earned media (credible endorsements from third



parties) and owned media (communications shared through their own channels). Owned media is essential for the foundation of a firm's and brand's main content library. Earned media help brands build their credibility. The rise of social networking sites (SNSs) has intensified interactions between brands and customers, as well as among customers discussing brands (Araujo et al., 2020). As a result, managing corporate websites and social media platforms has become essential for brands to communicate their positions on social, environmental, and political issues. Accordingly, the previous classification of media content into three types—paid, owned, and earned—initially termed the “media trinity” by Burcher (2012, p. 4), started to be divided into four categories known as the paid, earned, shared, and owned (PESO) model (Dietrich, 2014). Shared media simply refers to the brand's content shared by the customers, partners, and influencers, generating additional impressions on top of the brand's own. Macnamara et al. (2016) surveyed 1,200 PR and communication professionals working in 23 Asia-Pacific countries and found that the PESO model started to shift to the shared, owned, earned, and paid (SOEP) model. Paid media, even providing higher reach for brands, became less effective due to quickly skipped ads. Also, ad-free platform memberships limit ad views. Therefore, brands focus more on shared and owned media channels to engage with their audience.

The updated PESO model shown in Figure 3.3 outlines numerous communication activities. While all touchpoints can be valuable, brands must prioritize the most impactful ones to effectively engage their target audience. This should follow the establishment of an IMC strategy grounded in the brand's SWOT analysis and value proposition.

AI technologies present numerous opportunities for enhancing regular PR activities and increasing operational efficiency. They can automate routine tasks, such as creating data-driven narratives, maintaining and updating media lists, aiding in crisis management, and transcribing audio content (Panda et al., 2019). Given the rapid spread of negative information, AI-driven tools provide timely alerts regarding online crises, negative word-of-mouth, and misinformation (Panda et al., 2019). This enables PR professionals to respond quickly and effectively with appropriate messaging.

Moreover, NLP technology is instrumental for both PR and content marketing practitioners in web and text mining, enabling the creation and distribution of engaging content. Content marketing emphasizes delivering valuable information to targeted audiences, primarily through social media platforms, offering a more relevant and engaging alternative to traditional advertising (Kotler et al., 2023). Various NLP subfields transform consumer interactions through conversational AI, virtual assistants, and chatbots, utilizing speech recognition, natural language understanding, and generation. NLP aids in various functions, including automatic language translation, information retrieval, extraction, text summarization, and question answering. However, the limitations of speech-to-text and natural language processing necessitate that human PR specialists oversee and approve the content generated by AI tools. For instance, languages that include casual phrases, expressions, idioms, and region-specific jargon, as well as words that have varying meanings in different locations, misspellings, and incorrect word usage, along with sentiments like sarcasm and irony, can pose significant challenges for NLP (Khurana et al., 2023).





FIGURE 3.3 The PESO Model© 2024

### Application 3.1 AI-powered Crisis and Reputation Management

In this exercise, you'll simulate a reputation management scenario for a well-known consumer brand facing a hypothetical crisis. A news story has broken, accusing the brand of unethical actions such as sourcing practices involving child labor or corporate-level miscommunication crises regarding allegations of low product quality by one of the consumers on social media. The news sparks negative responses on social media and draws public backlash. The brand is struggling to mitigate the crisis while retaining customer trust and loyalty. Your objective is to develop a data-driven action plan, using AI tools to monitor, assess, and respond to the reputation crisis.

Possible AI tools you can search include but are not limited to the following ones:

1) Sentiment Analysis: Google Cloud Natural Language API, MonkeyLearn, or Hootsuite Insights. 2) Social Media Monitoring: Brandwatch, Meltwater, Sprinklr. 3) Feedback and Survey Tools: Qualtrics, SurveyMonkey. 4) Recommendation Engines for Positive Content: Google Cloud Recommendations, Salesforce Einstein.

#### Step 1: Simulate Negative Feedback Data Collection

- Collect simulated crisis data, including customer complaints, negative news articles, and social media posts.
- Monitor platforms like Twitter, Instagram, and review sites (Yelp, Trustpilot) using sentiment analysis tools (e.g., MonkeyLearn, Hootsuite) to assess overall sentiment.
- Gather historical sentiment data to identify shifts in consumer perception pre-crisis.

#### Step 2: Implement AI Tools for Crisis Detection and Monitoring

- Utilize AI tools for sentiment analysis to track shifts in sentiment and engagement across platforms.
- Conduct topic clustering to categorize complaints and media mentions (e.g., ethics, quality concerns) for targeted responses.
- Use trend analysis tools like Google Trends to assess the growth or decline of negative brand attention.

#### Step 3: Create a Response Plan with Tailored Recommendations

- Define stakeholder personas for different affected segments.
- Craft targeted messaging for each persona (consumers, dealers, NGOs), including apology statements for ethical concerns and transparency updates.
- Use recommendation engines to share positive content that re-engages customers.

#### Step 4: Evaluate and Adjust Response Plan Based on Real-Time Feedback

- Establish a feedback loop to monitor customer reactions and make adjustments.
- Deploy quick surveys to assess post-crisis perceptions.
- Track engagement and recovery metrics.

## Enhancing Brand Visibility

In the competitive landscape, consistent brand visibility strengthens a brand's perceived identity and is crucial for maintaining and growing a brand's presence in the market. AI is increasingly becoming a key driver in integrating brands into the customer touch point, revolutionizing how brands engage with their audiences and optimize their visibility strategies. This subsection explores the role of AI in enhancing brand visibility across several categories, such as in-store branding, product placement, sponsorship, and venue identification.

Brand visibility extends into retail store locations and selling environments through packaging, signage, and portable aisle displays (Juska, 2022). AI enhances the effectiveness of retail display material by providing insights into optimum placement and design. Computer vision and machine learning algorithms analyze in-store traffic patterns and consumer interactions to recommend the most effective display strategies. Moreover, AI tools can help create attractive display materials that appeal to the target audience. By examining data on consumer preferences and behavior through in-store facial recognition and eye-tracking systems, retail displays can improve brand visibility and drive consumer engagement.

In order to make optimum product placement decisions, machine learning and predictive analytics enable brands to analyze program performance data and forecast trends and consumer behavior, allowing for more strategic and impactful product placements. For example, AI can analyze viewing habits and audience engagement on social media to recommend optimal times and platforms for product placement in television shows or online content, ensuring maximum visibility and relevance.

Identifying suitable venues for brand exposure is essential for maximizing impact. AI aids in this process by analyzing data related to audience demographics, venue performance metrics, and geographical trends. Through NLP and sentiment analysis, marketers can evaluate past event reviews and social media mentions to select venues that align with their brand's target audience.

Similarly, it is possible to enhance the effectiveness of event sponsorships by providing insights into the alignment between brands and events. Machine learning algorithms analyze historical data on event performance, audience engagement, and brand alignment to predict the potential impact of sponsorship deals. Additionally, AI-powered tools monitor real-time social media activity and sentiment during events, enabling brands to measure the immediate effectiveness of their sponsorships and adjust their strategies accordingly. This data-driven approach ensures that sponsorship investments are directed toward events with the highest potential for brand visibility and positive engagement.

Considering all, from optimizing product placements to identifying the most appropriate sponsorships, AI-enabled applications can assist marketers. By leveraging AI technologies, businesses can make informed, data-driven decisions, optimize their marketing strategies, and improve their visibility in a competitive market.

## Reaching Out Through Digital Media Platforms

Digital media platforms, an essential component of the IMC mix, refer to digital assets that a company controls and manages. Websites, social network sites, online communities and forums, and personal blogs became major sources of information and entertainment.

The rise of social media platforms created new opportunities for AI. In 2021, Facebook started using NLP to create advertisements (Adcostly, 2021). As big data emerged in the 2010s, AI-driven predictive algorithms gained the ability to forecast future behaviors and trends by analyzing customer online purchase patterns, interactions, and preferences. Advancements in computational methods and deep reinforcement learning enable brand monitoring and analysis of customer sentiments and tailored campaigns through social media management and analytics (Roetzer & Kaput, 2022; Kumar et al., 2024).

Generative artificial intelligence has driven major developments across multiple fields, such as machine learning, NLP, computer vision, and autonomous systems (Amankwah-Amoah et al., 2024). It breaks new ground in content marketing, building on other traditional AI technologies. Content marketing is the process of producing and sharing useful, pertinent material to capture the attention of a specific audience, ultimately encouraging profitable customer behaviors. When managed effectively, it serves as a key element of IMC by fostering strong engagement and loyalty in a cost-efficient manner.

AI technology enables non-human social media influencers, commonly referred to as virtual influencers (VI). VIs are computer-generated agents designed through graphic technologies using computer vision and AI (Thomas & Fowler, 2021). Many VIs, similar to real ones, possess unique personalities, create media content, and engage actively with their followers. As their popularity grows, brands are increasingly partnering with them. For instance, Hatsune Miku, a pioneering virtual celebrity, has released music and merchandise, held live concerts, and collaborated with brands like BMW, Google, and McDonald's (Hoang & Su, 2019). Similarly, Lil Miquela, a human-like virtual influencer, worked with fashion brands Calvin Klein, Dior, and Prada. Ma and Li (2024) demonstrated that VIs with a higher degree of human likeness are more effective in enhancing brand perception and exerting greater persuasive influence compared to their less humanlike counterparts. Furthermore, when a VI closely resembles a real human, audience responses are comparable to those elicited by actual human influencers. This finding provides marketers with a viable strategy to collaborate with highly humanlike VIs for brand endorsements.

## **AI-Enabled Sales Promotion**

Online sales promotion activities are increasingly driven by sophisticated algorithms that optimize their effectiveness. AI technologies can improve the effectiveness of brand logo merchandise strategies by analyzing consumer data to identify trends and preferences. Machine learning algorithms can predict which merchandise items will likely be popular among different segments. By analyzing design trends and consumer feedback, these algorithms also assist in creating appealing and trendy merchandise.

E-commerce platforms such as Amazon employ dynamic pricing strategies and timely promotions based on algorithmic insights derived from various data points. These insights indicate user behavior, such as items left in shopping carts, time spent on advertisements, user profiles, previously visited sites, and purchase history. A notable example is Wendy's dynamic pricing strategy, which utilizes data analytics to tailor value offers and discounts in slower times (Wendys.com, 2024). By leveraging tracking and consumer profiling, brands can implement value invitations, psychological rewards, and targeted interactions that resonate more deeply with their audiences.

Digital coupons and popular promotional methods like buy-one-get-one (BOGO) offers, cashback deals, free trials, gift merchandise, brand sampling, games and puzzles, and contests (Juska, 2022) can be optimized using AI-driven measurements. For example, A/B testing, asking online visitors' opinions by showing two alternative versions, conducted on large user bases, allows marketing practitioners to identify and select the most enjoyed and effective promotional alternatives, enhancing the overall impact of their IMC efforts.

### **Application 3.2 Promotional Offers A/B Testing**

Imagine you are a digital marketing manager of an e-commerce company. Offering a promotion or free incentive is one of the most effective ways to encourage customers to join your campaign, while also helping to generate leads and expand email lists. Free incentives include ebooks, reports/white papers, webinar invitations, e-newsletter memberships, or free consultations.

#### **Instructions**

Using online A/B testing tools, you are requested to test two different promotional offers: a) Sales promotion versus free incentive and b) 10% price discount versus 20% price discount offer and measuring convergence for both offers. Explore a variety of A/B testing tools to follow the instructions. Possible tools include but are not limited to Optimizely, Dynamic Yield, Visual Website Optimizer (VWO), and Google Optimize, which can be paired with Google Analytics for enhanced insights.

- 1 Test whether your audience prefers a product discount or a free incentive in exchange for their contact information.
- 2 Experiment with different types of free incentives, such as industry reports or newsletter memberships, to see which resonates more with your audience.
- 3 Evaluate the effectiveness of your discount offer. While a larger discount is often assumed to drive more conversions, if a 10% discount generates similar results to a 20% discount, it may be more beneficial to continue with the 10% offer to minimize potential losses.
- 4 Analyze the impact of discount offers and free incentives on your brand value and customer perception.
- 5 Evaluate how discount strategies affect operational management, including inventory and shipment planning.
- 6 Examine whether your promotional offers drive customer referrals, encourage repeat sales, enhance customer experience, and foster brand loyalty.

For more information, please visit the source website at: <https://optimmonster.com/8-ab-tests-to-run-on-your-popups-to-get-more-email-subscribers/#image>

In the realm of in-store promotions, the integration of the Internet of Things (IoT) and AI systems offers significant advantages. IoT, with its network of interconnected sensors, captures real-time data from the physical retail environment and converts it into actionable insights. For example, IoT technology can track customer movements within stores, enabling retailers to send in-app promotion notifications when shoppers are in specific aisles (Kotler et al., 2023). AI enhances this system by continuously analyzing data from IoT sources, helping marketers understand customer preferences and behaviors in real time. This facilitates timely and location-based customer engagement (Rosenkrans & Myers, 2018), allowing businesses to deliver the most relevant products or content tailored to individual needs. These tracking activities may be questioned and found to be intrusive or unethical by the brand's customers.

AI's role in sales promotions, dynamic pricing, and in-store marketing represents a transformative shift in traditional promotion or merchandising strategies. Businesses can significantly enhance their marketing effectiveness by harnessing algorithms for dynamic pricing and promotional strategies, utilizing digital coupons, and integrating IoT with AI for real-time insights. When managed meticulously without irritating customers, these technologies refine promotional tactics and enable highly personalized and timely customer interactions.

## Enhancing Personal Contact Through AI

AI-enabled systems increasingly identify potential customers with a high probability of conversion, examining historical data and performance ratios to suggest optimal next steps (Noble & Mende, 2023). For instance, AI can analyze past customer behavior to recommend targeted actions, such as personalized follow-up actions or special offers, based on the customer's engagement history.

Personalized chatbots and tailored email marketing enhance personal contact by adapting marketing messages and experiences to individual customers' behavioral patterns. For example, personalized chatbots engage with customers in real time, providing relevant information and support, based on their past interactions.

Call-tracking AI platforms further enrich personal contact by analyzing and interpreting the narratives behind customer conversations (Kumar et al., 2024). Platforms like Talkdesk extract valuable insights from call recordings, refining this data to build comprehensive customer profiles. This enables businesses to deliver high-quality, personalized customer service and optimize their IMC and CRM processes.

An illustrative example is Salesforce's Einstein AI, which predicts prospects' likelihood to convert based on their interaction patterns. If a prospect frequently engages with email campaigns but has yet to make a purchase, Einstein AI might recommend sending a personalized, limited time offer to incentivize conversion. This approach enhances the effectiveness of follow-ups by automating reminders for the sales team (Kumar et al., 2024).

These AI-driven processes extend beyond business-to-consumer (B2C) interactions; they are equally valuable in business-to-business (B2B) contexts where sales cycles are often longer and more intricate (Kim & Kumar, 2018). In B2B marketing, AI-powered Customer Relationship Management systems assist in managing and cultivating leads throughout extended decision-making phases. These systems offer tailored content delivery and automated follow-ups based on previous lead interactions and preferences, aiming to increase conversion rates.

Beyond lead generation and follow-up, machine learning algorithms can facilitate upselling opportunities for industrial solution providers. Many B2B companies with complex product catalogs struggle to promote new products effectively and phase out outdated solutions. Marketing and sales managers often organize product launch events and business fair displays, but adoption remains limited in the field. AI-driven product specification tools assist technical sales teams by delivering precise, project-specific solutions during customer interactions, helping them select the most suitable options and enhancing customer satisfaction.

## CASE STUDY 3.2

### Enhancing Upselling and Product Adoption Through AI-driven Personalization

Schneider Electric, a leader in the electrical supply industry with a catalog of over 100,000 products, faced challenges in engaging electricians who tended to rely on outdated product offerings. Recognizing the need for a more efficient approach to product selection, Schneider Electric embarked on a digital transformation initiative utilizing Amazon Personalize, an AI-driven machine learning service. This innovation aimed to enhance decision-making for electricians navigating their extensive product range while improving product adoption and upselling opportunities.

Key features included personalized recommendations derived from electricians' previous interactions, contextual insights tailored to project specifications, and real-time learning capabilities that continuously refined recommendations based on user engagement.

Upon deployment, the prototype significantly improved the quoting process, empowering electricians to make more informed product choices and presenting newly launched products more effectively. As a result, Schneider Electric observed a notable increase in the adoption of its innovative products and a rise in upselling instances. By leveraging data to provide actionable insights, the company improved the electricians' experience and facilitated a culture of continuous learning and adaptation in product usage.

This case study highlights the implications of integrating AI in B2B marketing, emphasizing improved value propositions and more effective personal interactions, thereby encouraging adoption across various industries.

### DISCUSSION QUESTIONS

- 1 What implications does the integration of AI-driven personalization have on customer relationships in the B2B landscape?
- 2 How can similar AI solutions be utilized in other sectors to enhance product recommendations and customer engagement?



- 3 What considerations should be taken into account to ensure the ethical use of customer data in AI-driven marketing solutions?
- 4 What measures can Schneider Electric implement to ensure continuous improvement and adaptation of its AI-driven product selection system?

For more information please visit the source website: <https://aws.amazon.com/tr/blogs/industries/how-schneider-electric-increased-opportunities-for-upselling-and-improved-the-adoption-rate-of-new-products-using-amazon-personalize/>

Personal contact within IMC is the most human-centered element; marketers and sales teams should use AI to support informed decision-making and improve efficiency in operational tasks, not to replace the human touch in customer relationships. By leveraging AI to identify high-conversion prospects, automate follow-ups, and personalize interactions, businesses can enhance their engagement with B2C and B2B customers. AI's capabilities in analyzing customer behavior, managing CRM processes, and optimizing communication channels lead to more effective and personalized marketing efforts, ultimately improving overall business performance and customer satisfaction.

## OPPORTUNITIES

AI is developing unprecedentedly. AI-enabled systems and tools provide efficiency to users who learn and adapt them. Younger generations are more adaptable to these changes. As a result, younger consumers are more engaged in digital platforms and AI-driven brand interactions. New media formats and emerging technologies (e.g., 5G, blockchain) are anticipated to provide opportunities and have the potential to transform digital marketing communication further (Malthouse & Copulsky, 2023; Yun & Strycharz, 2023). Advances in the emotional capabilities of AI solutions may open new avenues for consumers and brands.

### New Generation Consumers

Marketers are increasingly targeting Generation (Gen) Z and Alpha, referred to as “digital natives” (Kotler et al., 2023, p. 26). Gen Z, born between the mid-1990s and early 2010s, have grown up in the digital era and are highly adaptive to new technologies. Generation Alpha, born after 2010, are expected to be more adept with technology as they are raised by tech-savvy parents (Kotler et al., 2023). Gen Z and Gen Alpha are connected through multiple screens and have selective attention spans. They prefer personalized content, ignore irrelevant messages, skip long advertisements, and prefer short-form content,



memes, and emojis. More engaging and personalized ads or short-form movies aired on interactive media might target these generations.

The increasing share of new generations in the brands' target audience requires seamless omnichannel communication at touch points and timely problem-solving through preferred channels. Firm-owned media assets such as AI-driven conversational chatbots, virtual assistants, personalized websites, and AI-powered digital accounts would enhance customer engagement, create opportunities for IMC, and achieve sustainable competitive advantage.

## **New Media Formats and Emerging Technologies**

In the Web 3.0 era, novel media formats such as augmented reality (AR) and virtual reality (VR) within the metaverse are emerging as new platforms for brands to engage with their audiences. This transition marks a shift from traditional media planning toward a more integrated approach focused on communication planning and consumer engagement (Kelley et al., 2022; Belk et al., 2023).

With the increasing prevalence of voice-activated devices, optimizing for voice search through AI-driven SEO tactics is essential. This allows brands to reach customers who prefer using voice queries over text. Additionally, incorporating voice commerce capabilities can simplify purchasing, enhancing user convenience. Brands can adapt their IMC strategies to cater to these mediums, creating content suitable for shorter, conversational queries and visually driven interactions.

Blockchain can enhance transparency in digital advertising, which supports building trust. Smart contracts can automate transactions based on predefined criteria, ensuring that advertising budgets are spent efficiently and effectively (Yun & Strycharz, 2023; Singh & Adhikari, 2023).

The rollout of 5G networks facilitates faster data transmission and enhances mobile experiences. Firms can leverage this technology to deliver richer multimedia content and improve real-time engagement through AI-driven applications, enhancing the overall customer experience. By integrating these advanced technologies, brands can stay ahead in the rapidly evolving digital landscape, offering more personalized and efficient interactions with their audience (Belk et al., 2023).

Another important opportunity lies in leaving emotional tasks to emerging technologies. Emotional tasks involve interpreting and responding to human emotions, such as generating empathetic responses or detecting emotional tones in written or spoken content. AI cannot experience emotions or understand social situations in a human-like manner, even though it can be trained to recognize emotional cues. For example, AI systems can identify joy through smiling faces and emotional expressions (Huang & Rust, 2024). The recent introduction of ChatGPT 4o, developed by OpenAI, has extended AI's capabilities into emotional tasks. AI can now craft responses that convey sympathy or encouragement in customer service interactions and analyze customer feedback for emotional sentiment. However, while AI demonstrates impressive capabilities in emotional recognition—such as detecting joy from facial expressions and generating empathetic responses—it is essential to recognize that AI does not experience emotions but instead simulates understanding based on data patterns. Thus, human intelligence should monitor

and intervene whenever needed. The emotional tasks are suggested to be handled within human-machine collaboration.

## CHALLENGES

AI technology presents opportunities across various fields, yet the rapid pace of innovation raises sociological, economic, and ethical concerns (Park et al., 2023). Autonomy of users in decision-making and unemployment concerns (Du & Xie, 2021) are only a part of the challenges on a sociological and economic level. These concerns are significant and warrant discussion that extends beyond the scope of this chapter. Consumers can experience benefits and drawbacks from interacting with AI applications (Puntoni et al., 2021; Wirtz et al., 2023a). AI brings forth many challenges that may change in breadth and depth regarding the supporting ecosystem and AI technology (Dwivedi et al., 2021; Malthouse & Copulsky, 2023).

AI technology carries risks such as biased algorithms leading to discrimination, potential data breaches, the sale of personal data for commercial or research purposes, and various ethical challenges (Breidbach & Maglio, 2020). One of the most crucial aspects of AI is the quality of data it relies on.

### Maintaining Data Quality

Marketers face challenges in using AI technologies like predictive analytics and GenAI to develop innovative, ethical, inclusive, and personalized strategies in a data-driven landscape. For instance, using improperly trained deep learning models with inaccurate data can result in misguided business plans, poor decision-making, and intrusive audience interactions. High-quality, sustainable data is essential for AI-driven systems supporting recommendation engines, social media content creation, customer sentiment analysis, and programmatic ad optimization (Kumar et al., 2024). When faulty data fuels predictive analytics, it can mislead outcomes in churn prediction and campaign optimization (Kumar et al., 2024). Despite the valuable insights these systems can offer, they should complement rather than replace human decision-making.

Training data may contain biased and prejudiced content, leading to biased decisions and eventually harming the brand. For instance, when a brand manager devises a sales campaign or brand communication plan based on gathered customer insights, it is crucial to ensure that the analyzed data accurately represents the target audience. The algorithm may also build bias when the data haven't been trained on diverse examples. In most use cases, bias is often unavoidable in AI as technologies and algorithms are developed by humans, who inherently bring their own perceptions and biases. Therefore, the initial step in mitigating biased approaches is to ensure inclusive and representative data gathering and management and employ explainable AI techniques to uncover disparities in decision-making processes (Dwivedi et al., 2023).

In the rapidly advancing field of AI-driven marketing communication planning, prioritizing research on bias is essential to develop processes that intentionally minimize its impact. Otherwise, biased results can harm customer trust, engagement, and the brand.

## Ensuring Ethical, Responsible, Explainable Usage of AI

As intelligent technologies accelerate hyper-personalized targeting, consumers have become increasingly concerned about companies learning details of their lives, leading to a perception of “being observed” (Lefkeli et al., 2022, p. 1993). This perception threatens their sense of autonomy in purchasing decisions and often results in avoiding recommended choices online (Zwebner & Schrift, 2020). Consequently, a growing number of consumers increasingly hesitate to share personal data on social platforms (Bright et al., 2021).

The “Responsible AI” approach involves adhering to legal and ethical aspects related to individual data collection. Regulators have restricted the type of data collected, exemplified by the European Union’s Data Collection Regulation (GDPR), which requires obtaining consumer consent to protect their privacy. Accordingly, brands must obtain permission from consumers to access and use their data. The use of AI in marketing raises ethical concerns that arise at the product, consumer, and societal levels (i.e., Du & Xie, 2021), including privacy and cybersecurity concerns of users, AI discrimination, autonomy and well-being of consumers, responsibility, and explainability of AI-based decision-making (i.e., Dwivedi et al., 2021; Ashok et al., 2022; Wirtz et al., 2023).

Ethical challenges for overall marketing processes are extensively discussed in a dedicated chapter of this book and are not covered in detail here. However, one critical issue that warrants greater attention in IMC is the “accountability” (Dwivedi et al., 2023) for AI-generated content shared with the audience or on the outcomes of a public relations activity (Galloway & Swiatek, 2018). AI algorithms generate insights, as well as create images, videos, and music based on uploaded data. This raises important questions about the actual ownership of intellectual property, especially in cases where disputes arise. As such, marketing professionals must exercise caution when utilizing AI-generated content. They should take responsibility for the content they produce, ensuring transparency in using AI tools and clarifying ownership and attribution. Maintaining ethical standards in this context is essential to protect intellectual property rights.

Adopting AI without proper oversight and human intervention can lead to inefficiencies and harm brand credibility. Key performance metrics, targeted segments, and the relevance of campaigns must be carefully managed. For example, a significant challenge is advertising fraud, which undermines the success of IMC by distorting data. For effective targeting and personalization, the data used must accurately reflect consumer characteristics. Online advertising fraud involves generating fake traffic data, often through bots or click farms, to increase profits at the expense of others. This leads to misinterpretations of ad clicks, flawed targeting, and budget optimization issues in programmatic ads (Malt-house & Li, 2017). Marketing communication professionals should evaluate performance results diligently and take timely actions to refine and optimize execution strategies.

To summarize, the rapid evolution of AI presents several challenges, including misleading predictions due to inaccurate or biased data, algorithmic biases, ethical concerns from consumers, and the need for AI literacy to control and explain AI results. Consumers’ security and privacy concerns directly affect their trust in AI tools. Clear guidelines and regulations are crucial to mitigating these issues. Marketing communication professionals must prioritize accountability, inclusiveness, and responsibility while utilizing AI technology, ensuring they adhere to ethical and legal standards when collecting and using customer data.

## IMPLICATIONS FOR PRACTITIONERS

According to the 2024 Work Trend Index Annual Report, 75% of employees already use AI at work. Forty-six percent of them started using AI less than six months ago. However, most organizations do not have a clear roadmap for AI adoption. AI adoption provides benefits for brands and marketing professionals.

First, AI provides personalization and targeted communication. Many firms already use AI to personalize their websites, emails, social media posts, videos, and other materials to better respond to customer demands. GenAI tools generate content and images tailored to user profiles when proper prompts are provided to the tools. The tone of the messages and ad designs can be regulated according to the micro-segments. Consumers can find products relevant to their needs easily and compare prices and promotional offers.

On the other hand, individualized content isolates social media users from diverse perspectives (Kumar et al., 2024). For example, social network sites' algorithms create a personalized feed based on user behavior, often leading to a "filter bubble" that isolates users from diverse content and viewpoints. Similarly, online consumers see a selected set of ads and offers filtered by algorithms. Marketers should seek a balance between personalization and inclusiveness to ensure that highly targeted marketing communications do not inadvertently exclude potential buyers who are not part of established segments.

Second, integrating marketing automation tools into communication processes provides efficiency when planned, adapted, and measured. One of the primary goals of AI is to automate routine jobs that formerly needed human intelligence. Organizations may decrease the human resources required to execute a project or the time an individual must dedicate to routine tasks, allowing for significant efficiency. Unemployment risks persist, and the communication ecosystem is expected to transform. New positions will emerge, requiring new skill sets. Marketing and communication practitioners should build new capabilities to creatively and efficiently prompt GenAI tools and analyze and interpret predictive analytics for high-caliber communication and relationship management.

To effectively leverage the benefits and manage the challenges of AI, companies should systematically incorporate AI tools into their marketing communication strategies, processes, and operations. Marketing practitioners should ensure that AI is managed according to a well-structured plan.

### Suggested AI Implementation Plan in Marketing Communications

#### 1 Establishing AI Usage Guidelines

- **Drafting AI Guidelines:** Outline AI usage guidelines that ensure sensitive company data, including trade secrets, are protected from exposure in AI training data.
- **Data Security Compliance:** Establish guidelines for employees to ensure the secure handling and inputting of data into AI tools, preventing the unauthorized use of sensitive information.

## 2 Identifying and Ranking IMC Challenges for AI Applications

- **Problem Identification:** Create a comprehensive list of potential IMC process problems that AI could address, ranked by their importance and viability.
- **Evaluation of Use Cases:** Assess specific AI use cases across IMC activities such as ad and content creation, programmatic ad management, campaign management, data analysis, email marketing, and customer engagement programs.

## 3 Fostering a Supportive AI Ecosystem

- **Systematic AI Integration:** Develop a systematic approach to integrate AI into marketing communications, starting with specific problems and progressing through incremental steps.
- **Brainstorming AI Solutions:** Organize brainstorming sessions to evaluate various AI-powered tools and technologies that could solve identified IMC challenges.

## 4 Enhancing AI Literacy and Experimentation

- **Building AI Literacy:** Implement ongoing training programs to enhance AI literacy within marketing and sales teams.
- **Encouraging Experimentation:** Promote a culture of experimentation with AI tools through pilot projects and trials to discover quick wins and drive team motivation.

## 5 Ensuring Data Security During AI Integration

- **AI Data Protection:** Formulate strategies to safeguard brand and company data while integrating AI systems, considering the risks of exposure.
- **Employee Training on Data Security:** Conduct training sessions for employees to highlight the importance of securing sensitive information when using AI tools.

## 6 Leveraging AI for Competitive Advantage

- **AI for Lead Generation and Ranking:** Explore AI-powered systems for lead generation and ranking in B2B markets to enhance competitive advantage.
- **Sentiment Analysis in B2C Markets:** Utilize AI tools for sentiment analysis of existing and target customers in B2C markets to better understand and engage with the audience.

## CHAPTER SUMMARY

Integrating AI into communication strategies enhances customer experience across IMC pathways: Advertising, public relations and publicity, brand visibility, digital media platforms, sales promotion, and personal contact. AI technology presenting machine learning and predictive analytics, NLP, and computer vision enables the capture of

customer insights and market data, enhances customer experiences, personalizes content, optimizes campaigns, plans media, and automates routine tasks. AI technology transforms communication processes by measuring and optimizing real-time campaign efficiency and impact. Thus, it provides cost savings and improved IMC planning for marketers.

On the other hand, ethical considerations such as data privacy, algorithmic biases, and unintended consequences are challenges that need to be carefully addressed before the adoption and implementation of AI in marketing communications. For ethical and responsible AI integration, preparing comprehensive guidelines to ensure compliance with legal and regulatory requirements and addressing crisis and risk management scenarios related to company-specific data security and branding are crucial.

Generative AI is rapidly evolving in a disruptive manner, reshaping the advertising and marketing ecosystem. It offers substantial benefits but also presents challenges. The marketing communication and advertising sectors are undergoing significant transformations driven by technological advancements, business shifts, and changes in employment. These developments are reshaping the collaboration between humans and AI and influencing customer experiences. Today's marketers have more tools, technology, and data than ever, with sophisticated strategies to build lasting customer relationships. Marketers' AI literacy, team skill development, and the sharing and evaluation of successful and unsuccessful use cases within the organization play a crucial role in fostering AI deployment and sustaining motivation. On the other hand, macroeconomic uncertainty has brought barriers, with insufficient human resources and budgetary constraints creating challenges for businesses and customers.

Considering the aforementioned points, it is essential for marketing educators to incorporate new AI concepts and application fields, including effective tools, opportunities, and challenges, into their teaching materials. New marketing and communication graduates with up-to-date skill sets will expectedly adopt a competitive business environment more easily, drive change, and work more effectively with AI-powered technologies. Critically, they must understand the limitations and ethical consequences of AI-driven decision-making, foresee potential risks, and take needed actions.

Looking to the near future, despite the unprecedented and disruptive pace of AI, marketing communication professionals should perceive this technology as a collaborative assistant rather than a threat. A symbiotic relationship between AI technologies and human insight can define the future of the communications profession and ecosystem. While routine, repetitive, and operational tasks are increasingly at risk of being automated by technology-driven tools, integrated marketing communications still necessitate creativity, strategic and critical thinking, and collaborative efforts to optimize and efficiently plan brand development and targeted performance campaigns across multiple channels. Marketers who enhance their skills and adapt to this evolving landscape will be crucial in driving success. Furthermore, fostering a sense of community will cultivate a collaborative environment, enabling brand and marketing communication teams to exchange best practices and results most relevant to their objectives, ultimately driving greater innovation and success.

## KEY TERMS

- **Adtech:** Advertising technology refers to the tools used to target, buy/sell, display, and measure digital advertising (Kerr et al., 2023).
- **Algorithm:** A sequence of steps to solve a specific problem. It is crucial to replicate human cognition and functions that involve learning and problem-solving and provide a set of rules to an AI program to assist it in independent learning.
- **Artificial Intelligence Advertising (AI advertising):** Use of AI technology such as deep learning (DL), machine learning algorithms, natural language processing, and face and voice recognition technologies to investigate, produce, and publish advertising (Xin et al., 2023).
- **Artificial Neural Networks (ANN):** Computational models inspired by the human brain, consisting of interconnected nodes that function like neurons. These nodes analyze data and adjust the strength of their connections, or “axons,” through training to perform specific tasks such as processing text, images, and audio (LeCun et al., 2015).
- **Cookie:** Memory device that serves as a bridge between a user’s browser and the server, allowing for tagging, storing, and transmitting user data (Pybus & Côté, 2024).
- **Deep Learning:** A subset of machine learning that uses artificial neural networks to make precise predictions by training models on large datasets. Deep learning models employ algorithms inspired by the structure and function of the human brain, commonly referred to as artificial neural networks (LeCun et al., 2015).
- **Earned Media:** Free media coverage and consumer-initiated brand actions.
- **Integrated Marketing Communication:** IMC is “the stakeholder-centered interactive process of cross-functional planning and alignment of organizational, analytical, and communication processes that permit continuous discussion by conveying transparent and consistent messages via all media to foster long-term profitable relations that create value” (Porcu et al., 2019, p. 14).
- **Machine Learning:** A method of data analysis that allows a system to learn over time by analyzing patterns from prior experience.
- **Marketing Automation:** The use of technology in marketing.
- **Technological marketing capabilities:** The organization’s ability to integrate and apply AI technologies to enhance marketing is evaluated through the lens of automated marketing and ethical implementation (Kumar et al., 2024).
- **Martech:** Marketing technology refers to tools used to deliver, measure, and optimize communication with both potential and existing customers via website, email, social media, mobile, and other channels (Kerr et al., 2023).
- **Natural Language Processing:** Allows machines to process and interpret human language, simplifying text data analysis and the extraction of customer sentiment and important themes.



- **Owned Media:** Communication touch points that the brand controls, including brand website, social media assets, and conversational agents.
- **Paid Media:** Communications purchased by the brand to reach consumers through advertising spending, paid partnerships with influencers, native advertising, and sponsored online reviews (Lovett & Staelin, 2016).
- **Shared Media:** The brand's content shared by the customers, partners, and influencers, generating additional impressions on top of the brand's own.
- **Synthetic Media:** Creation, production, and distribution of video content, programs, and brand messaging using advanced algorithms that modify, manipulate, and combine user-generated text, images, and digitally stored material (Juska, 2021).

## DISCUSSION QUESTIONS

- 1 Imagine a company commemorating its 50th anniversary with an integrated campaign designed to showcase its brand heritage and deepen its emotional connection with the audience. Simultaneously, it aims to continue performance marketing campaigns during the same quarter, leveraging Christmas and Black Friday opportunities. What key differences might emerge in 1) IMC strategies and 2) AI-supported advertising processes and applications? Further, discuss the resources in terms of budget, time for preparations, and human-AI allocation.
- 2 Imagine a home furniture company operating across Europe and the Middle East that requires a communication plan to promote its new product designs. Review the PESO model in Figure 3.3 and propose specific actions to implement across the four media types. Which of these actions can be enhanced with AI tools? Discuss the application of AI in both global and local communication.
- 3 Hyper-personalized ads can be viewed as a double-edged sword. Do you support or oppose hyper-personalized ads targeting you online? Why? What factors might persuade you to change your stance?
- 4 AI design tools democratize ad creation and content production, empowering individuals with less expertise to participate and significantly lowering production costs. However, these processes are vulnerable to manipulation (Campbell et al., 2022). Do you support or oppose the use of synthetic media? Explain why.
- 5 Discuss the concepts of ethical, responsible, inclusive, and explainable artificial intelligence. How do regulatory developments influence marketing communication professionals?
- 6 How do you think the concepts of employment, creativity, and social media echo chambers are influenced by AI?



**TABLE 3.1** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Agorapulse</b>	<a href="http://www.agorapulse.com/">www.agorapulse.com/</a>	Improve social media copy to be more engaging
<b>Brand24</b>	<a href="https://brand24.com">https://brand24.com</a>	Measure your brand awareness across social media, news, blogs, videos, forums, podcasts
<b>ChatGPT</b>	<a href="https://chatgpt.com/">https://chatgpt.com/</a>	Generate marketing strategy, content, and analysis
<b>Copilot</b>	<a href="https://copilot.microsoft.com/">https://copilot.microsoft.com/</a>	Enhance productivity, creativity, and strategy across Microsoft apps
<b>Google Cloud</b>	<a href="https://cloud.google.com">https://cloud.google.com</a>	Google Cloud AI builds custom ML models, Google Ads for AI-driven creative insights, Google Trends for public interest topics
<b>HeyGen</b>	<a href="http://www.heygen.com/">www.heygen.com/</a>	Create product/content marketing videos narrated by synthetic avatars in different languages
<b>Hubspot</b>	<a href="http://www.hubspot.com/">www.hubspot.com/</a>	Generate content, create marketing campaigns, monitor brand visibility
<b>Hume</b>	<a href="http://www.hume.ai/">www.hume.ai/</a>	Interpret customer emotions and generate customizable responses
<b>Insider</b>	<a href="https://useinsider.com/">https://useinsider.com/</a>	Provides marketing platform for individualized omnichannel customer experiences
<b>Jasper</b>	<a href="http://www.jasper.ai/">www.jasper.ai/</a>	Create blog posts, social media content, and email marketing copy
<b>Runway</b>	<a href="https://runwayml.com">https://runwayml.com</a>	Generate realistic videos using text prompts
<b>Semrush</b>	<a href="https://semrush.com">https://semrush.com</a>	Manage SEO, competitor research, and social media marketing from one platform
<b>Smartwriter</b>	<a href="http://www.smartwriter.ai/">www.smartwriter.ai/</a>	Enhance personalized email marketing campaigns

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI, and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.

**FIGURE 3.4** QR Code to Online Support Material

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# Artificial Intelligence as a Crucial Catalyst in Revolutionizing E-commerce Marketing

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## LEARNING OBJECTIVES

**Readers will be able to:**

- 1 Understand the fundamental role of AI in the e-commerce sector.
- 2 Explore how AI enhances marketing strategies within e-commerce.
- 3 Analyze the challenges and opportunities presented by AI integration in e-commerce.
- 4 Assess the implications for practitioners in adopting AI technologies.

## A BRIEF HISTORY OF AI IN E-COMMERCE

E-commerce is shorthand for electronic commerce. It involves buying and selling goods and services online through websites, mobile apps, and marketplaces—just not in a physical location; the transaction is completed through the internet (Wilkinson, 2023). The relevance of AI in e-commerce is multifaceted, impacting various aspects of the online shopping experience. The integration of AI technologies into e-commerce platforms has enhanced customer service, personalized shopping experiences, and optimized business operations. It has revolutionized how businesses operate and interact with customers through content structure, navigation, and user experience (BlackTruck, 2022). The initial



foray of AI into e-commerce began in the late 1990s and early 2000s, primarily through basic algorithms to recommend products to customers. Amazon.com pioneered this trend with its collaborative filtering technology, which analyzed user behavior to suggest products (Linden et al., 2003). This marked the beginning of personalized shopping experiences, setting the stage for more sophisticated AI applications. By 2026, it is anticipated that 24% of retail purchases will occur online, with the e-commerce market exceeding \$8.1 trillion. E-commerce has become a crucial sales channel for brands and consumers (Wilkinson, 2023).

## Collaborative Filtering and Recommendation Systems

The early 2000s saw the rise of collaborative filtering and recommendation systems as central components of e-commerce platforms. These systems used customer data to make personalized recommendations, significantly enhancing user experience and boosting sales through improved accuracy (Alamdari et al., 2020). Companies like Netflix and eBay followed Amazon's lead, integrating recommendation algorithms into their platforms (Gomez-Uribe & Hunt, 2015).

### Application 4.1 AI-powered Personalized Product Recommendations

In this exercise, you will use an AI tool (such as a machine learning model in Python ([www.python.org/](http://www.python.org/)) or an accessible platform like Google Cloud's AI Recommendations (<https://cloud.google.com/generative-ai-app-builder/docs/preview-recommendations>)) to generate personalized product recommendations based on simulated customer browsing data.

First, collect sample browsing behavior data from an account of your own like Amazon or Spotify (e.g., products viewed, time spent, and categories browsed). Next, feed this data into the AI tool to train a recommendation model. After the model learns from the browsing patterns, you will be able to implement it to generate tailored product recommendations for different simulated customer personas.

From here, evaluate the effectiveness of these recommendations by comparing them with preset customer preferences and discussing how personalized recommendations impact customer satisfaction and potential sales to explore how AI can enhance customer engagement and retention through tailored marketing efforts, aligning with industry strategies in e-commerce and digital marketing.

## Natural Language Processing and Chatbots

By the mid-2010s, advancements in natural language processing (NLP) led to the development of chatbots and virtual assistants (Adamopoulou & Moussiades, 2020). These AI-powered tools provided real-time customer support, answered queries, and assisted with purchases. Facebook Messenger and other messaging platforms began integrating

chatbots for business purposes, improving customer engagement and operational efficiency. Many brands are using AI chatbots to improve the customer experience (Kaushal & Yadav, 2023). Whether or not it is successful is up to interpretation (Khan, 2023). To ensure the customer experience is enhanced, chatbots must offer greater personalization, scalability, and omnichannel engagement to enhance the customer experience (Krishnan & Mariappan, 2024). Findings by Kaushal and Yadav (2023) reiterate this from their exploratory study from a business-to-business (B2B) perspective that chatbots should provide a grievance management dashboard where customers can view live queries, resolved queries, current query status, and more, ensuring transparency. Chatbots also streamline the lead qualification process and significantly improve and accelerate data collection, enhancing the overall customer experience.

## **Machine Learning and Predictive Analytics**

Machine learning and predictive analytics emerged as powerful tools for e-commerce in the 2010s. These technologies enabled businesses to analyze vast amounts of data, predict customer behavior, and optimize inventory management (Chui et al., 2016). Companies like Alibaba and Walmart leveraged AI to enhance their supply chain operations, resulting in more efficient logistics and better customer service (Iansiti & Lakhani, 2020).

## **AI-driven Marketing and Personalization**

The late 2010s and early 2020s witnessed significant advancements in AI-driven marketing and personalization through big data (Krishnan & Mariappan, 2024). AI algorithms analyzed customer data to create highly targeted marketing campaigns, personalized emails, and dynamic pricing strategies. This period also saw the rise of voice-activated shopping assistants, such as Amazon's Alexa and Google Assistant, which further personalized the shopping experience (Davenport et al., 2020). One of the most significant applications of AI in e-commerce is personalized product recommendations. By analyzing customer behavior, purchase history, and browsing patterns, AI algorithms can predict and suggest products that customers are likely to buy. This improves customer satisfaction and increases sales and customer retention (Smith & Linden, 2017). This is also where social commerce picks up speed. While global social media commerce statistics are impressive, they are also substantial in the United States. In 2023, it was estimated that 106.8 million people shopped on social media (Snyder, 2024). This figure is expected to grow by 10.6%, reaching 118 million Americans by 2027. By 2030, it is estimated that social media commerce will reach \$8.5 trillion globally (Snyder, 2024).

## **Customer Service Automation**

Automated customer service is a method of resolving issues without the need for human agents. This approach utilizes technologies like AI-powered chatbots to handle customer support tasks, replacing the traditional role of people in the problem-solving process. AI-powered chatbots and virtual assistants have revolutionized customer service in e-commerce (Rane et al., 2023a; 2023b). Advantages include instant responses to

## Advantages of Customer Service Automation



Empowered  
Customers



Productive  
Agents



Real-Time &  
Quick Responses



Reduced Costs  
& Overhead

**FIGURE 4.1** Top Advantages of Using AI in Customer Service Activities

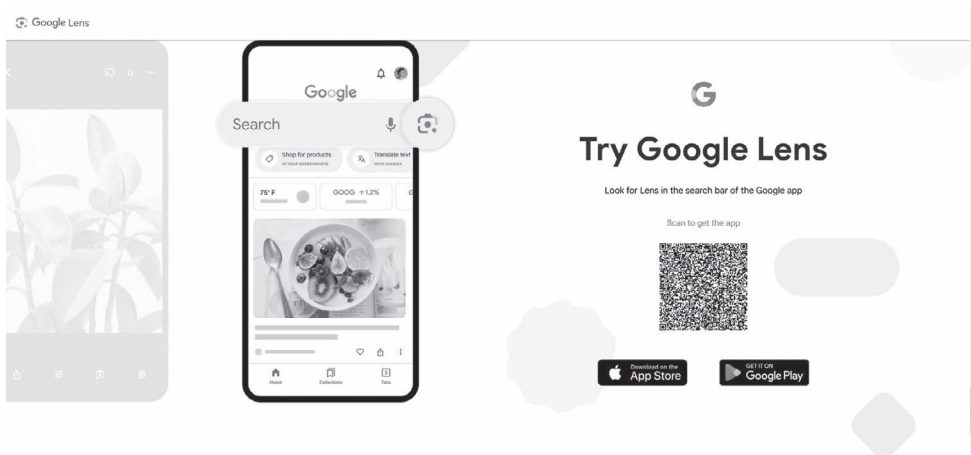
customer inquiries, handling multiple customer interactions simultaneously, and offering 24/7 support (Adamopoulou & Moussiades, 2020). They improve customer engagement and reduce the operational costs associated with human customer service representatives.

### Computer Vision (Visual Search)

Computer vision is an AI technology that enables computers to recognize and classify visual images (BigCommerce, n.d.). E-commerce companies use this technology to improve product search and recommendations (Anand et al., 2021). For example, a customer can take a picture of a product they are interested in and use an app that incorporates image recognition to find the product quickly (see Figure 4.2).

### Supply Chain and Inventory Management

AI also plays a crucial role in optimizing supply chain and inventory management (Blanchard, 2021). Machine learning algorithms can predict demand patterns, optimize stock levels, and streamline logistics operations. This leads to reduced costs, improved



**FIGURE 4.2** Homepage of Google Lens

Note: Google Lens lets you search what you see. Using a photo, your camera, or almost any image, Lens helps you discover visually similar images and related content, gathering results from all over the internet (Google, 2024). Google and the Google logo are trademarks of Google LLC.

efficiency, and better fulfillment of customer orders (Wang et al., 2016). Supply chain decision-makers will need a plan to take advantage of the increase in the volume of available data through these tools that are particularly adapted to this type of processing.

## Fraud Detection and Security

E-commerce platforms are vulnerable to various types of fraud, including payment fraud and account takeovers. AI enhances security by analyzing transaction patterns and detecting anomalies that may indicate fraudulent activities. This proactive approach helps mitigate risks and protect businesses and customers. Integrating AI into e-commerce has significantly transformed the industry by enhancing customer experiences, streamlining operations, and improving security.

## EXPANDING MARKET REACH THROUGH AI-ENHANCED TARGETING

AI has revolutionized how businesses approach marketing, offering sophisticated tools to expand market reach through enhanced targeting. By leveraging AI, companies can analyze vast amounts of data to gain deep insights into consumer behavior, preferences, and purchasing patterns. These insights enable the creation of highly personalized marketing campaigns that resonate with specific audience segments, thereby increasing engagement and conversion rates.

AI-powered tools such as predictive analytics and machine learning algorithms can identify potential customers most likely to respond positively to marketing efforts. This

predictive capability allows marketers to allocate resources more efficiently and design targeted campaigns that address different consumer groups' unique needs and interests (Wu, 2023). For instance, AI can analyze social media interactions, browsing history, and past purchase data to predict which products or services a consumer might be interested in, allowing for precise and timely recommendations (Gentsch, 2019).

AI can facilitate real-time targeting by continuously analyzing data and adjusting marketing strategies based on current trends and consumer responses (Babatunde et al., 2024). This dynamic approach ensures that marketing efforts remain relevant and effective in a rapidly changing marketplace. Companies like Amazon and Netflix have successfully used AI-driven recommendation systems to expand their market reach by offering personalized suggestions that keep customers engaged and coming back for more.

### **Increasing Operational Efficiency by Reducing Redundancies**

AI enhances market reach and significantly increases operational efficiency by reducing redundancies (Sullivan & Wamba, 2024). By automating repetitive and time-consuming tasks, AI allows businesses to focus on more strategic activities that drive growth and innovation. For example, AI-powered chatbots can handle routine customer inquiries, freeing up human agents to address more complex issues that require a personal touch.

In addition to customer service, AI can streamline various operational processes such as inventory management, supply chain logistics, and data analysis (Sallam et al., 2023). Machine learning algorithms can predict demand patterns, optimize inventory levels, and reduce the risk of overstocking or stockouts (Mahi, 2024). This level of efficiency is crucial for maintaining a smooth operation and reducing costs (Davenport & Ronanki, 2018).

AI can also enhance decision-making by providing real-time insights and analytics. Businesses can use AI to monitor key performance indicators (KPIs) and identify improvement areas. By leveraging AI-driven analytics, companies can make informed decisions quickly, reducing the time and effort spent on manual data analysis (Davenport & Harris, 2017).

### **Enhancing Customer Retention Through Improved Interaction**

Customer retention is critical to business success, and AI plays a pivotal role in enhancing customer interactions to foster loyalty. AI-driven customer relationship management (CRM) systems can analyze customer data to identify patterns and trends, enabling businesses to anticipate customer needs and provide personalized experiences. This represents a paradigm shift in business (Rane et al., 2023a).

AI-powered chatbots and virtual assistants offer 24/7 customer support, ensuring customers receive timely and accurate responses to their queries (Van Belleghem, 2015). These tools can handle various tasks, from answering frequently asked questions to guiding customers through the purchasing process. By providing consistent and efficient service, AI helps build trust and satisfaction, leading to higher customer retention rates (Rane et al., 2023b).

Customer engagement through personalized marketing messages and offers is easily enhanced by an AI assist. By analyzing customer behavior and preferences, AI can

deliver targeted promotions and recommendations that resonate with individual customers (Kumar et al., 2019). This level of personalization makes customers feel valued and understood, which is essential for building long-term relationships.

## Application 4.2 Building Your Own AI Chatbot

In this activity, you will design and develop a simple AI chatbot tailored to meet a specific audience's needs, such as helping new students navigate campus resources or assisting online shoppers. Following these steps, you will create a chatbot:

- 1 Define Purpose and Audience:** Identify the chatbot's primary goal (e.g., answering FAQs) and its target users.
- 2 Choose Development Platform:** Based on coding skills, select a no-code tool (like Dialogflow or Chatfuel) or a code-based approach (using Python libraries such as NLTK or TensorFlow).
- 3 Prepare Training Data:** Collect sample questions and responses relevant to the chatbot's purpose.
- 4 Design Conversation Flows:** Map out key conversation paths, including questions, responses, and fallbacks.
- 5 Implement Logic:** Build the chatbot's structure and logic on the chosen platform.
- 6 Test and Refine:** Test with peers, refining responses and flow based on feedback.
- 7 Deploy and Monitor:** Launch the chatbot and track performance for ongoing improvement.

By building this chatbot, you will gain practical experience in designing conversational AI and learn to fine-tune interactions based on user needs.

Here are some beginner-friendly platforms for students to build and deploy AI chatbots:

- 1 Dialogflow (by Google Cloud)** (<https://cloud.google.com/products/conversational-agents>): Ideal for creating natural language chatbots with a visual interface. It supports various integrations, including web and social media platforms.
- 2 Chatfuel** (<https://chatfuel.com/>): A popular no-code platform that specializes in creating chatbots for Facebook Messenger and websites. Chatfuel has drag-and-drop design tools, making it easy for beginners.
- 3 Microsoft Bot Framework** (<https://dev.botframework.com/>): Suitable for students with some coding experience. It allows for building versatile chatbots with various integrations and comes with tools to design conversational flows.
- 4 IBM Watson Assistant** ([www.ibm.com/products/watsonx-assistant](http://www.ibm.com/products/watsonx-assistant)): Offers a user-friendly interface and advanced AI capabilities. Students can create chatbots and deploy them to websites or messaging platforms.

- 5 **Landbot** (<https://landbot.io/>): A no-code chatbot builder with a focus on conversation design. It's great for interactive web chatbots, allowing students to create detailed conversation flows.
- 6 **ManyChat** (<https://manychat.com/>): Geared toward social media, especially Facebook Messenger and Instagram, ManyChat's visual editor is straightforward and offers growth tools for small businesses.
- 7 **BotStar** (<https://botstar.com/>): This platform lets students create chatbots with a visual flow builder and provides pre-built templates, ideal for common use cases like customer support and lead generation.

## Providing New Avenues for Product and Service Delivery

AI opens new avenues for products and services by providing businesses with the tools to explore uncharted territories and develop cutting-edge solutions. AI-driven analytics can uncover hidden patterns and insights that inspire the development of new products and services tailored to meet evolving customer needs. For example, AI can analyze customer feedback and market trends to identify gaps in the market and areas for improvement. This information can guide the development of innovative products that address specific pain points or enhance existing offerings.

Companies like Tesla have even leveraged AI to develop advanced vehicle features, such as autonomous driving and predictive maintenance, setting new standards in the automotive industry (Kumari & Bhat, 2021). AI can also facilitate the co-creation of products and services by involving customers in the process. Through AI-powered platforms, businesses can gather customer input and preferences, enabling them to design products that better align with customer expectations (Chesbrough, 2020). This collaborative approach strengthens the bond between the brand and its customers.

## Promoting the Role of AI in Sustainable and Ethical Marketing Practices

As businesses strive to adopt more sustainable and ethical practices, AI plays a crucial role in promoting responsible marketing (Bai et al., 2020). AI can help companies minimize their environmental impact by optimizing resource use and reducing waste. For instance, AI-driven supply chain management can enhance efficiency and reduce carbon emissions by optimizing routes and transportation methods.

## TECHNICAL CHALLENGES IN AI INTEGRATION WITHIN E-COMMERCE

Integrating AI into e-commerce operations presents numerous technical challenges that must be addressed to ensure successful implementation. One significant challenge is the

complexity of AI algorithms and models. Developing and deploying AI systems often requires specialized data science, machine learning, and software engineering knowledge. The intricate nature of these technologies can create barriers for e-commerce businesses that lack the necessary expertise or resources (Ojha et al., 2024).

Another technical challenge is the integration of AI with existing e-commerce platforms. Many businesses operate on legacy systems not designed to support advanced AI technologies (Gupta, 2021). Integrating AI with these systems often involves significant modifications, which can be both time-consuming and costly. Additionally, ensuring compatibility and seamless communication between AI applications and legacy systems can be a complex task (Vemulapalli, 2024).

The scalability of AI solutions is also a critical concern (Ramírez & Islam, 2024). AI applications need to be scalable to handle increasing volumes of data and growing user demands. However, achieving scalability can be difficult due to the computational resources required to process and analyze large datasets. High-performance computing infrastructure, cloud services, and optimized algorithms are often necessary to scale AI solutions effectively within the e-commerce sector (Kumar et al., 2019).

## Ethical and Privacy Concerns in Data Usage for E-commerce

AI in e-commerce raises significant ethical and privacy concerns related to data usage. AI systems rely on vast amounts of data to train and operate effectively. This data often includes sensitive personal information, which can be susceptible to misuse or unauthorized access (Voigt & Von dem Bussche, 2017). Protecting user privacy and ensuring data security are paramount to maintaining consumer trust and compliance with regulations such as the General Data Protection Regulation (GDPR) (BlackTruck Media, 2018).

One ethical concern is the potential for bias in AI algorithms (Akinrinola et al., 2024). AI systems learn from historical data, which may contain inherent biases. If not addressed, these biases can lead to unfair or discriminatory outcomes, particularly in personalized recommendations and pricing strategies. Ensuring that AI systems are designed and trained to mitigate bias is essential to promoting fairness and equity in e-commerce (Patel, 2024). Transparency and explainability are also critical ethical considerations. AI systems often operate as “black boxes,” making decisions based on complex algorithms that are difficult to understand. This lack of transparency can hinder accountability and make it challenging for users to trust AI-driven outcomes. Developing methods and policies to explain AI decision-making processes and ensuring transparency in data usage are vital to addressing these ethical concerns (Wallace, 2023; Patel, 2024).

### Application 4.3 Evaluating and Mitigating Bias in AI-driven Recommendations

In this activity, you will explore ethical issues around bias in AI systems, focusing on personalized recommendations in e-commerce. First, you will review sample data containing product browsing and purchasing histories that the AI algorithm uses for



training. Then you will identify potential biases in the dataset, such as patterns that may favor specific demographics over others.

Next, develop strategies to mitigate these biases, such as diversifying training data or implementing fairness constraints. Using a simple recommendation tool or coding library (e.g., Python's scikit-learn: <https://scikit-learn.org/>), you will then implement and test these strategies, observing changes in recommendations to different user profiles.

Finally, discuss transparency by examining ways to make the AI model's decision-making processes understandable. Present findings on how bias was addressed and develop a brief policy recommendation on ensuring transparency and accountability. This activity encourages critical thinking about fairness and transparency in AI while providing hands-on experience in designing ethical AI solutions.

You can access sample e-commerce data containing browsing and purchase histories from several publicly available sources:

- 1 **Kaggle** ([www.kaggle.com/](http://www.kaggle.com/)): A popular platform with datasets for machine learning projects, including e-commerce datasets. Examples include the "E-commerce Data" or "Retailrocket" datasets, which contain anonymized browsing and purchasing behavior.
- 2 **UCI Machine Learning Repository** (<https://archive.ics.uci.edu/>): This repository hosts datasets like the "Online Retail" dataset, which includes transaction data from an e-commerce platform and can be used to simulate browsing and purchase histories.
- 3 **Google Dataset Search** (<https://datasetsearch.research.google.com/>): A search tool specifically for datasets, allowing students to find e-commerce-related data relevant to their project needs.
- 4 **Amazon Customer Reviews Dataset** (<https://amazon-reviews-2023.github.io/>): Amazon provides a public dataset containing customer review data that includes purchase patterns and behaviors, accessible through Amazon's AWS Public Datasets.
- 5 **Academic and Open-Source Repositories**: Sites like Zenodo (<https://zenodo.org/>) or Figshare (<https://figshare.com/>) often host datasets for research purposes and may have retail-related datasets suitable for exploring AI bias.

These sources offer diverse and comprehensive data that students can leverage to analyze and address bias in AI recommendations.

## Scaling AI Solutions Across Different E-commerce Market Segments

Scaling AI solutions across different e-commerce market segments presents unique challenges due to various industries' diverse needs and characteristics (Lissy et al., 2024). Each

market segment may have specific requirements, regulations, and customer expectations to consider when implementing AI technologies. One challenge in scaling AI is customizing solutions to meet the specific needs of different e-commerce segments. AI applications must be tailored to address each industry's unique problems and opportunities. This customization often requires significant investment in research and development and collaboration with industry experts to understand the nuances of each market segment (Krishnan & Mariappan, 2024).

Another challenge is the regulatory environment (Wallace, 2023). Different e-commerce sectors are subject to varying regulations that can impact the deployment of AI solutions. For example, the healthcare sector within e-commerce must comply with stringent data privacy laws, such as the Health Insurance Portability and Accountability Act (HIPAA) (Kluge, 2024), while the financial industry is governed by regulations like the Payment Card Industry Data Security Standard (PCI DSS). Navigating these regulatory landscapes and ensuring compliance is essential for the successful scaling of AI solutions (Arrieta-Ibarra et al., 2018) (see Online Support Material at [www.routledge.com/9781032743332](http://www.routledge.com/9781032743332) for a variety of other compliance-related policies). Market readiness and adoption rates also vary across segments. Some e-commerce sectors may be more receptive to AI technologies, while others may exhibit resistance due to factors such as organizational culture, existing workflows, and perceived risks. Developing strategies to educate and engage stakeholders, demonstrate the value of AI, and address concerns is crucial for fostering adoption across different market segments (Igbinenikaro & Adewusi, 2024).

## **Dependence on Quality Data for AI Effectiveness in E-commerce**

The effectiveness of AI systems in e-commerce is heavily dependent on the quality of the data used to train and operate them. High-quality data is accurate, complete, relevant, and timely. Ensuring that AI systems have access to quality data is essential for achieving reliable and accurate outcomes (Drenik, 2023). Data quality issues such as missing values, inaccuracies, and inconsistencies can significantly impact the performance of AI models. Poor-quality data can lead to incorrect predictions, biased results, and unreliable insights. Therefore, e-commerce organizations must implement robust data governance practices to ensure the integrity and quality of their data.

Data collection and preprocessing are critical steps in ensuring data quality. AI systems often require large datasets to train effectively, which must be collected from reliable sources. Additionally, data must be preprocessed to remove noise, handle missing values, and normalize features. Effective data preprocessing is essential for improving the accuracy and performance of AI models (Aremu et al., 2018). Another challenge is the dynamic nature of data. Data can change over time due to evolving business conditions, market trends, and user behaviors (Gama et al., 2014). AI systems must be continuously updated and retrained to reflect these changes and maintain their effectiveness. This requires ongoing monitoring, data collection, and model maintenance to ensure that AI solutions remain relevant and accurate in the fast-paced e-commerce environment.

## **Overcoming Customer Skepticism Toward AI-driven E-commerce Services**

Customer skepticism toward AI-driven e-commerce services is a significant barrier to adoption (Peham, 2023). Many customers may be concerned about AI technologies' reliability, transparency, and ethical implications. Overcoming this skepticism requires building trust and demonstrating the value of AI-driven services. One approach to building trust is through transparency and education. E-commerce businesses should provide clear and accessible information about how AI technologies work, their benefits, and the measures in place to protect customer data and privacy. Educating customers about the positive impacts of AI and addressing common misconceptions can help alleviate concerns and build confidence in AI-driven services (Siau & Wang, 2018).

Providing tangible examples of successful AI implementations can also help overcome skepticism. Case studies, testimonials, and demonstrations of AI-driven solutions can showcase the AI technologies' practical benefits and effectiveness. By highlighting real-world applications and success stories, e-commerce organizations can illustrate the value of AI and its potential to enhance customer experiences (Brock & von Wangenheim, 2019). Ensuring ethical practices and accountability is another critical factor in addressing customer skepticism. E-commerce businesses must demonstrate a commitment to ethical AI by implementing fair and unbiased algorithms, protecting user privacy, and being transparent about data usage. Establishing ethical guidelines and accountability frameworks can help build trust and reassure customers that AI-driven services are being used responsibly (Floridi et al., 2018).

Integrating AI into e-commerce operations presents a complex landscape of technical challenges, ethical considerations, and the need for quality data. Overcoming these hurdles is essential for successfully leveraging AI to drive change, efficiency, and customer engagement. Addressing technical challenges involves developing expertise, ensuring system compatibility, and achieving scalability. Ethical and privacy concerns must be addressed through transparency, fairness, and regulation compliance. Scaling AI solutions requires customization, regulatory navigation, and fostering market readiness. Dependence on quality data necessitates robust data governance and continuous model maintenance. Finally, overcoming customer skepticism involves transparency, education, and ethical practices. By addressing these multifaceted challenges, e-commerce businesses can harness the full potential of AI to achieve sustainable and ethical growth.

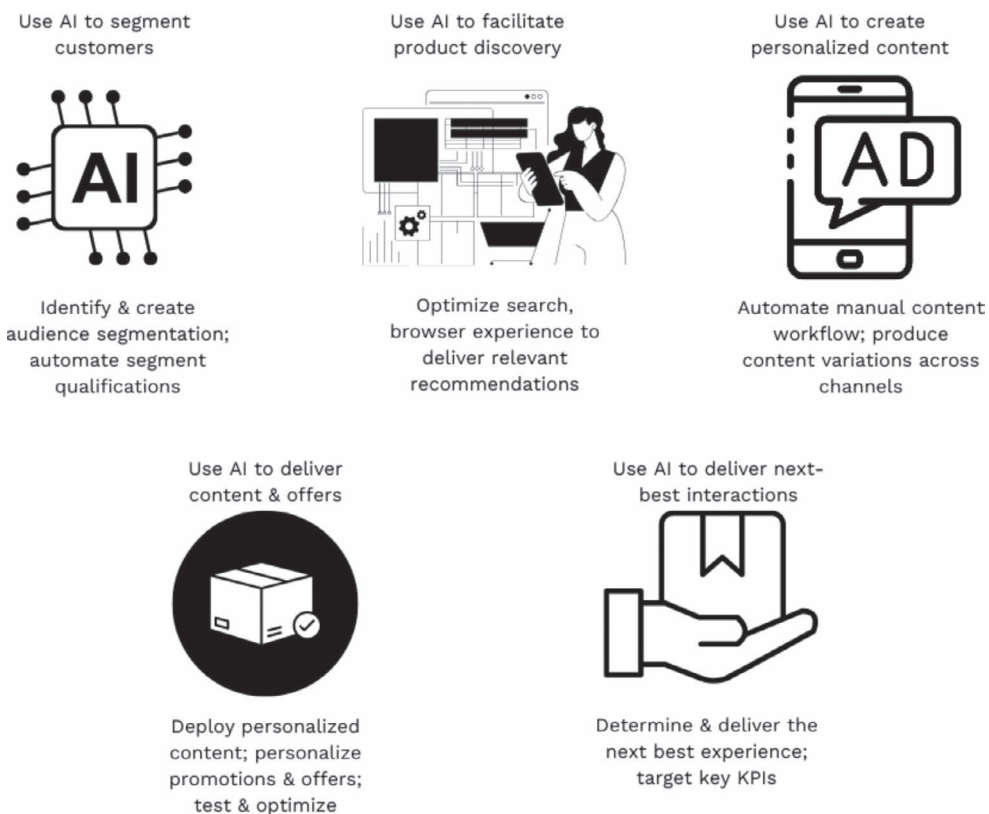
## **IMPLICATIONS FOR MARKETING PROFESSIONALS**

The future of AI in e-commerce marketing promises a transformative impact on how businesses engage with consumers and optimize their operations. As AI technologies continue to advance, they are expected to revolutionize various facets of e-commerce marketing, from personalized customer experiences to sophisticated predictive analytics, ultimately driving growth and efficiency in the industry. In an era where AI is increasingly integrated into marketing practices, understanding its implications is crucial

for industry practitioners. This section delves into the strategic considerations necessary for effectively implementing AI in marketing campaigns, emphasizing the importance of aligning AI initiatives with organizational objectives while maintaining ethical standards. By exploring key areas such as brand credibility, data privacy, and seamless system integration, this discussion provides marketers with insights on how to leverage AI responsibly to foster trust, enhance consumer relationships, and sustain competitive advantages.

## Strategic Considerations for Implementing AI in Marketing Campaigns

When implementing AI in marketing campaigns, marketers must consider several strategic implications to maximize effectiveness and ensure ethical practices. These implications are critical for aligning AI capabilities with organizational goals and consumer expectations. When setting an AI strategy, Adobe (Bhatt, 2023) recommends that you consider personalization as demonstrated in Figure 4.3.



**FIGURE 4.3** Five Ways to Use AI for E-commerce Personalization

## Brand Credibility

Marketers who deploy AI initiatives must carefully consider their implications for brand credibility, as it is a fundamental determinant of consumer trust and loyalty. AI-driven marketing initiatives, while powerful in generating creative content and predicting consumer behaviors, can inadvertently impact brand perceptions if not managed judiciously—particularly if a brand is known for authenticity and creativity (Kulp, 2023).

Ideally, AI use must be transparent, ensuring consumers understand how their data is being utilized and how AI influences marketing decisions to avoid perceptions of manipulation or privacy invasion, which can erode trust (Paschen et al., 2020). In essence, as AI becomes increasingly integrated into marketing strategies, it is imperative that marketers prioritize practices that uphold and enhance brand credibility to foster long-term consumer relationships and sustain competitive advantage (Dignum, 2018).

## *Privacy-by-Design Trends*

Previous reports from the IAB's State of Data (2024a) revealed that 95% of the advertising and marketing industries were unprepared for data privacy challenges and signal loss. IAB (2024a) emphasizes that companies that focus on innovation ultimately achieve greater sustainability and maintain competitive advantages. A study involving over 500 advertising firms and data experts was conducted to assess the adoption of Privacy-By-Design ecosystems. Participants expressed their belief that this new model would enhance the quality of data collection, improve consumer targeting, personalize shopper experiences, and refine measurement processes (IAB, 2024b).

## Enhanced Personalization and Customer Experience

One of the most significant trends anticipated in the future of AI in e-commerce marketing is the enhancement of personalization. Advanced machine learning algorithms and data analytics will enable e-commerce platforms to create highly personalized shopping experiences. AI will analyze vast customer data, including browsing history, purchase patterns, and social media activity, to deliver tailored product recommendations and personalized marketing messages (Rust, 2020). This level of personalization is expected to significantly improve customer satisfaction and loyalty as consumers increasingly seek customized interactions and relevant product suggestions. Figure 4.4 shows ways in which customized content is served to prospective buyers.

## *Data Privacy and Security*

AI systems rely heavily on consumer data to generate insights and personalize experiences. Marketers must ensure that data collection and processing comply with relevant regulations such as the General Data Protection Regulation, the Children's Online Privacy Protection Rule (COPPA), and the California Consumer Privacy Act (CCPA). Compliance is even more critical for marketers in regulated industries (such as health or finance). Ensuring robust data security measures protects consumer information and builds trust



**FIGURE 4.4** How Generative AI Supplements the Customer Journey with Personalization

and credibility (Acquisti et al., 2016). See Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) for a sampling of North American and European Union legislation related to online behavior.

### *Ethical Considerations and Data Privacy*

As AI becomes more integrated into e-commerce marketing, ethical considerations and data privacy concerns will be paramount (Clark, 2024). Numerous problems with AI training data (which tends to underrepresent certain populations) have illustrated that ethical considerations must be integrated into AI strategy (Buolamwini, 2019). AI should be used to augment human decision-making rather than replace it entirely, which includes avoiding biases in AI algorithms that could lead to unfair treatment of specific consumer groups. Ethical AI practices are essential for maintaining corporate social responsibility

and fostering long-term consumer relationships (Floridi et al., 2018). Businesses must navigate the challenges of balancing personalized marketing with ethical practices, adhering to data protection regulations, and addressing potential biases in AI models (Floridi et al., 2018). Ensuring transparency in AI algorithms and safeguarding customer data will be critical to maintaining consumer trust (Edelman, 2024).

Integration with Legacy Systems and Processes

Furthermore, integration with existing systems and processes should be seamless. Marketers must ensure that AI technologies integrate well with existing customer relationship management (CRM) systems, analytics platforms, and other marketing tools. This integration facilitates a cohesive strategy, ensures the most comprehensive representation of a company's available data is used, and ensures that AI-driven insights are actionable and aligned with overall marketing objectives (Davenport & Ronanki, 2018).

Automation and Efficiency

The automation of marketing processes through AI is set to enhance operational efficiency in e-commerce. AI-powered tools can automate various marketing tasks, such as content creation, email marketing, and social media management. NLP algorithms can generate compelling product descriptions and marketing copy, while AI-driven platforms can schedule and optimize the timing of marketing campaigns for maximum impact. This level of automation will reduce the workload for marketing teams and ensure that marketing efforts are executed with precision and consistency (Microsoft, n.d.).

Marketing automation enables the execution of a digital marketing strategy without requiring manual intervention at each step. Future-facing strategies include saving time allowing you to derive value from customer data by offering data-driven insights into customer preferences and needs. These insights facilitate the creation and deployment of targeted, personalized campaigns. While specific functionalities differ across solutions, marketing automation systems will better assist organizations with the following; see Table 4.1 (Microsoft, n.d.):

TABLE 4.1 Various Functionalities and Solutions for Campaigns	
Function	Description
Lead generation/qualification	Personalize content relevant to customer interests to generate more leads. Real-time lead scoring identifies which leads are most likely to purchase, enabling sales teams to prioritize the most promising opportunities
Audience identification	Assist in finding the right audience for each campaign to maximize effectiveness

**TABLE 4.1** (Continued)

<i>Function</i>	<i>Description</i>
<b>Content design</b>	Ensure consistent branding across multi-channel campaigns using generative AI or prebuilt, customizable templates
<b>Demand generation</b>	Create, nurture, and manage prospect interest with lead and data management across multiple channels
<b>Campaign delivery</b>	Automatically launch, adjust, and manage campaigns, plus obtain detailed metrics to assess performance and identify areas for improvement
<b>Workflows based on schedules and customer behaviors</b>	Set up automatic next steps, such as follow-up emails and text messages triggered by customer actions
<b>Event management</b>	Plan, manage, and coordinate online and in-person events to increase the reach and impact of your marketing efforts

### *Voice and Visual Search*

Emerging AI technologies such as voice and visual search are poised to redefine the e-commerce marketing landscape. Voice-activated assistants like Amazon’s Alexa and Google Assistant facilitate seamless voice-based shopping experiences, allowing consumers to search for products and purchase using natural language commands (Shopify, 2024). Similarly, visual search technology will enable customers to find products by uploading images, enhancing the convenience and accuracy of product searches (Reid, 2023). These innovations have opened new avenues for e-commerce marketing as businesses develop strategies to optimize their presence on voice and visual search platforms (Grewal et al., 2020). For example, over 50% of the US population currently uses voice search features daily (Yancey, 2022), 27% of online users are using voice search globally (Daga, 2024) with about 71% of all online shoppers in the US using voice assistance to research and purchase products via e-commerce (Colorhistle, 2024).

#### **Application 4.4 Exploring Voice and Visual Search in E-commerce**

In this activity, you will explore the role of voice and visual search technologies in e-commerce. First, research and compile data on how consumers use voice and visual search to discover and purchase products, noting key statistics and insights about adoption rates and user behavior.



Next, select a popular product and simulate optimizing it for both voice and visual search. For voice search, brainstorm keywords and phrases that align with natural language queries a consumer might use. For visual search, select a clear product image and analyze how different visual characteristics (e.g., colors, shapes) could make the product more identifiable in a search.

Present your findings, discussing how businesses can adjust their marketing strategies to be more visible on these platforms and the potential benefits of doing so. This activity enhances understanding of new AI-driven search methods and their implications for e-commerce marketing.

## Continuous Learning

As with most technologies, continuous learning and adaptation are vital. AI technologies, their uses, and consumer behaviors are continually evolving. Marketers should invest in ongoing learning and development to stay abreast of the latest AI advancements and adapt their strategies accordingly. This continuous improvement approach will help maintain competitive advantage and relevance in a rapidly changing market environment (Brynjolfsson & McAfee, 2017).

## *Predictive Analytics and Customer Insights*

By leveraging machine learning models, businesses can forecast consumer behavior, identify emerging trends, and optimize marketing strategies. Predictive analytics will enable e-commerce companies to anticipate customer needs and preferences, allowing for more targeted marketing campaigns and efficient inventory management (Davenport et al., 2020).

## **Skills and Competencies Required for AI Adoption**

A 2023 survey by The Conference Board found that 68% of marketers were already using AI daily (Dahlhoff, 2023). In particular, several foundational skills will be important.

- **Data Literacy:** Proficiency in data literacy empowers practitioners to be skeptical, evaluate data quality, recognize patterns, and derive actionable insights from large datasets—critical for developing effective marketing campaigns (Gupta, 2021).
- **Technical Proficiency:** Marketers must familiarize themselves with AI software and technologies such as machine learning algorithms, natural language processing, and predictive analytics (Davenport & Ronanki, 2018). AI tools can only be used to their full potential when practitioners understand how they work and their limitations.
- **Critical Thinking and Problem-solving:** The ability to question assumptions, identify biases, and develop relevant strategies to address marketing challenges is fundamental to using AI tools (Brynjolfsson & McAfee, 2017).

- **Communication Skills:** Marketers need to understand how to translate complex AI concepts into intelligible terms for both team members and decision-makers so that they understand the benefits and implications of AI applications in marketing (Dav-enport & Ronanki, 2018).

## Navigating Regulatory and Legal Landscapes

E-commerce marketers using AI for digital marketing must navigate an increasingly complex regulatory and legal landscape to ensure compliance and maintain consumer trust. The issues that may confront practitioners regularly include data privacy and protection frameworks, intellectual property (trademark and copyright) protections, and even consumer protection laws (Appel et al., 2023). Ignorance is not indeed bliss, and marketers must take responsibility for learning and applying complex regulatory policy and laws to their client work. See Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) for a list of additional legal considerations in e-commerce and e-marketing environments.

### Data Privacy and Protection

As previously discussed, the GDPR and CCPA are only two of the current legal frameworks marketers must be versed in regarding data privacy and protection. These regulations mandate strict guidelines on data collection, storage, and processing, emphasizing the need for explicit consumer consent and the right to access and delete personal data (Bakare et al., 2024).

### Intellectual Property

Trademark and copyright are concepts that marketers should be familiar with, and intellectual property rights are taking on challenging new dimensions with the use of generative AI tools (Appel et al., 2023). Given that the source material LLMs like ChatGPT are trained on copyrighted content, they occasionally produce outputs that are too similar to the original work and violate copyright law (Helms & Krieser, 2023).

At the time of writing, several lawsuits against the AI platform ChatGPT are being heard in court. Filed by various parties including newspapers, artists, comedians, and authors—the creators allege that their intellectual property rights were violated by the generative AI platform using their copyrighted work as training data (Krietzberg, 2024). The European Union is currently working on a legal framework for AI, labeled the “EU AI Act,” that will impose new requirements on organizations using AI (Meier & Spichiger, 2024).

Additionally, GPTs can produce the same results for multiple users, which raises questions about the ownership of these outputs and whether they can be copyrighted.

### Consumer Protection

American consumers have growing fears surrounding innovation and AI (Faverio & Tyson, 2023). “Rapid innovation offers the promise of a new era of prosperity, but

instead risks exacerbating trust issues, leading to further societal instability and political polarization” (Edelman, 2024, p. 1). As such, marketing practitioners should also consider the implications of consumer protection laws, which safeguard against misleading advertisements and ensure that AI-generated content adheres to truth-in-advertising standards. Regulatory agencies such as the Federal Trade Commission (FTC) in the United States provide guidelines to prevent deceptive practices and protect consumer rights (FTC, 2019). One example of a practice not protected by law is using generative AI to create deepfake celebrity endorsements, which has started to proliferate online (Fischer, 2024).

## **Long-term Impact on Job Roles and Industry Structure**

AI technologies will likely have significant changes to job roles in marketing, as well as the overall structure of the industry. The long-term implications of these transformations will change how marketing activities are conducted and the skills marketing professionals need to have.

### **Redefinition of Job Roles**

A variety of job roles within marketing will likely be altered by AI technologies, as they ease routine tasks and enable more data-driven decision-making. As a result, marketing professionals need to develop new skills in AI (such as effectively writing prompts) and data analytics to effectively interpret AI-generated insights (Davenport & Ronanki, 2018).

### **Enhancement of the Creative Process**

Creative processes in marketing are already experiencing significant change—AI-powered tools can generate content, design advertisements, and personalize customer interactions to deliver more impactful and individually tailored messages. The effect has been to reduce the amount of technical skill and lower the budget needed to produce high-quality creative assets—though the creative industry is wary of the potential this has to commodify the work of artists and reduce job opportunities (Valentine, 2024).

### **Emergence of New Roles**

As more organizations formally adopt AI technologies, they will need skilled professionals to help them create strategies, implement, and maintain these tools. The first major brand to create an AI-specific leadership role was Coca-Cola, which named Pratik Thakar as “Global Head of Generative AI” in July 2023 (Hiken, 2023). Examples of AI-specific roles that could come to marketing could include AI analysts, data scientists, solutions architects, and machine learning engineers (Wilson & Daugherty, 2018). In their annual “Future of Work in America Report” McKinsey estimates an expected 12 million occupational

transitions will occur through 2030 due to generative AI implications (McKinsey, 2023), with 1 million of those transitions to brand new occupations forming.

### Shift in Industry Structure

AI's impact on marketing extends beyond individual job roles to the broader structure of the industry. Traditional marketing agencies may need to evolve into hybrid models that combine human creativity with AI capabilities. Agencies increasingly offer AI-related services, such as predictive analytics, programmatic advertising, and real-time customer engagement strategies (Rust, 2020). This evolution will create competitive differentiation based on the ability to integrate and innovate with AI technologies.

## Future Trends in AI Development and Their Potential Impact on E-commerce

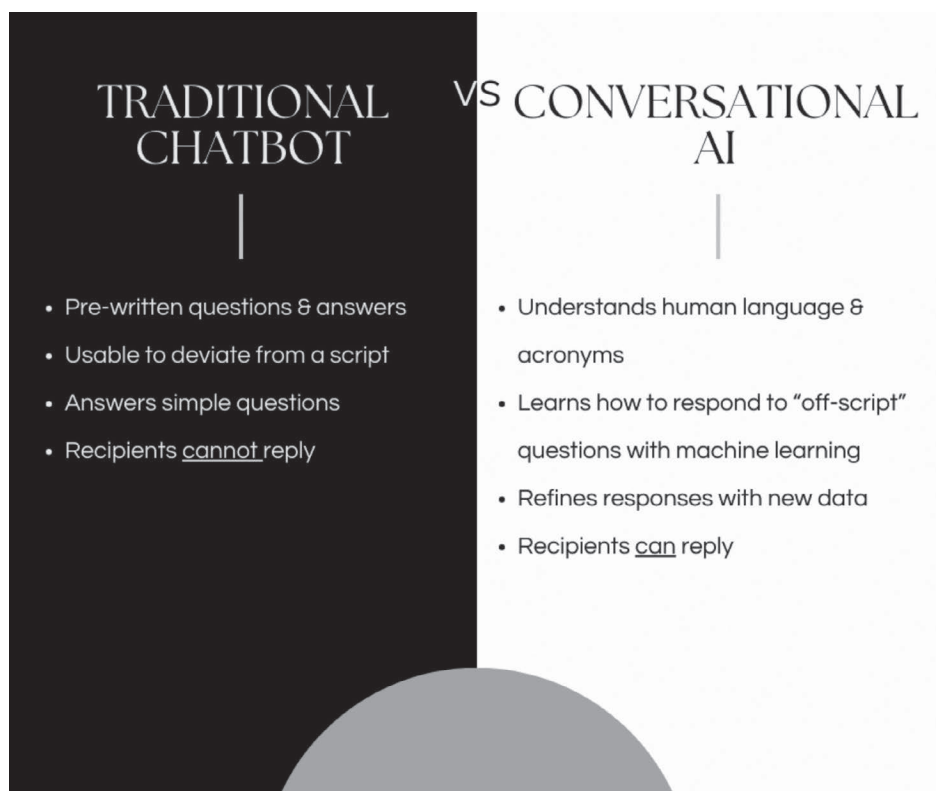
AI technology in e-commerce marketing continues to experience rapid transformation and is poised to advance in a variety of ways, many of which are already underway. Some broad categories that will likely see significant advancement include hyper-personalization and predictive analytics, conversational AI, content creation, data analytics and customer insights, and continued integration with the Internet of Things (IoT).

### Hyper-personalization and Predictive Analytics

AI's processing capabilities will continue to break down silos and allow larger amounts of consumer data to be analyzed in real time to feed algorithms that make messaging more effective at scale. Beyond audience personas, AI has the potential to individualize messaging based on each customer's consumer preferences and behaviors. Predictive analytics, operationalized by AI, will enable marketers to anticipate consumers' needs with ramifications from improved product recommendations to supply chain efficiencies—all of which can potentially improve customer satisfaction (McKinsey Global Institute, 2023).

### Conversational AI

Already prolific, chatbots and virtual assistants will further transform e-commerce marketing by improving the customer experience (and gathering additional data to feed algorithms). AI-driven tools that provide instant, personalized support will rely on less human intervention to operate well. The possibility even exists that these technologies will detect and interpret customer emotions during interactions—allowing for more empathic and effective customer service (Sahota, 2024). In the lifetime of chatbots, we have already witnessed a change from traditional chatbots to conversational AI (see Figure 4.5).



**FIGURE 4.5** Evolution from Traditional Chatbots vs. Today’s Conversational AI [bots]

## Content Creation

AI’s role in content creation will continue to expand in their capabilities and ubiquity, making generative tools easier to use and more effective in their outputs. These technologies are already embedded in various surfaces, from Adobe’s Photoshop (which can make once-laborious edits dramatically simpler) to the ad copy fields in Facebook Ads’ Business Manager (which offer suggestions for additional headline and primary text variants). In the future, we may find that any mediated access point for human input is paired with AI to improve the interaction and the ultimate creative outcome (Hubspot, 2023).

## Data Analytics and Customer Insights

AI’s ability to analyze complex datasets will provide deeper customer insights, enabling more effective segmentation and targeting, better attribution for measurement, and improved forecasting that will benefit inventory management and the supply chain (Bleich, 2024). Insights from these tools will be more timely and easier to obtain as LLMs continue to improve and are integrated into the data analytics platforms, allowing marketers to ask the questions they want answered.

### Application 4.5 Using AI to Generate and Analyze Sales Forecasts for E-commerce

In this activity, you will learn how AI can enhance sales forecasting for an e-commerce business. First, input sample e-commerce sales data (including monthly sales figures, seasonal trends, and promotion periods) into an AI forecasting tool or a platform like Google Sheets with an add-on for forecasting. The AI will analyze past sales patterns and generate a forecast for the upcoming period.

Once the forecast is created, examine how external factors like seasonality or promotions impact sales predictions. Then adjust your forecast to account for a hypothetical promotion or seasonal event, comparing the initial and adjusted projections. Finally, use these insights to propose marketing strategies to maximize sales during high-demand periods or adapt to expected low-demand months.

This activity equips you with hands-on skills in leveraging AI for data-driven decision-making and illustrates how forecasting can be a vital tool in shaping e-commerce marketing strategies.

For this sales forecasting activity, here are some accessible AI forecasting tools that you can use:

- 1 **Google Sheets Forecasting (with Add-Ons)** ([https://workspace.google.com/marketplace/app/ai\\_budget\\_forecasting/924636480206](https://workspace.google.com/marketplace/app/ai_budget_forecasting/924636480206)): Google Sheets has built-in time series forecasting functions, and students can enhance these with add-ons like *AutoML Tables* or *BigML* for more advanced predictions.
- 2 **Microsoft Excel Forecast Sheet** (<https://support.microsoft.com/en-us/office/create-a-forecast-in-excel-for-windows-22c500da-6da7-45e5-bfdc-60a7062329fd>): Excel includes a built-in forecasting tool that uses the exponential smoothing model. For beginners, this is straightforward and allows customization with seasonal and trend adjustments.
- 3 **Amazon Forecast** (<https://aws.amazon.com/forecast/>): A machine learning service designed to handle complex data, Amazon Forecast allows students to input their dataset, apply custom metrics (such as seasonality), and generate detailed forecasts. It's an excellent option for those with access to AWS.
- 4 **Orange Data Mining** (<https://orangedatamining.com/>): Orange is a visual machine learning and data mining platform with time-series forecasting widgets, making it ideal for beginners who want to explore data-driven forecasting without extensive coding.
- 5 **Python Libraries (Prophet, Scikit-Learn)**: For students with coding experience, the *Prophet* library by Facebook ([http://facebook.github.io/prophet/docs/quick\\_start.html](http://facebook.github.io/prophet/docs/quick_start.html)) or *Scikit-Learn* (<https://scikit-learn.org/>) offers flexible forecasting models. Prophet is designed for time series data, making it easy to analyze seasonality and holidays.

Each of these tools provides different levels of customization and insight, so students can choose based on their familiarity with AI tools and data analysis.

## AI Integration with the IoT

The convergence of AI and Internet of Things (IoT) technologies will allow e-commerce marketers to operationalize insights from new sources of data—the internet-connected devices situated in a customer’s environment. These new realms of contextualized data could feed personalized recommendations and prescribe predictive maintenance intended to nurture customer relationships (Khan, 2023).

## CHAPTER SUMMARY

The history of AI development in e-commerce is characterized by continuous adaptation. AI has transformed e-commerce into a dynamic and highly efficient industry, from early recommendation systems to advanced predictive analytics and personalized marketing. As AI technologies continue to evolve, their impact on e-commerce is expected to expand, ushering in new possibilities for businesses and consumers.

The future of AI in e-commerce marketing is marked by immense potential for innovation and growth. Enhanced personalization, predictive analytics, automation, and emerging technologies like voice and visual search will drive the evolution of e-commerce marketing strategies. However, businesses must also address ethical considerations and data privacy to build and sustain consumer trust in an increasingly AI-driven market, therefore restoring trust in the promise of online environments.

### KEY TERMS

- **California Consumer Privacy Act (CCPA):** A law that gives consumers rights over their personal information, including the right to know what information is collected, how it is used, and the right to delete it.
- **Children’s Online Privacy Protection Rule (COPPA):** Imposes certain requirements on operators of websites or online services directed to children under 13 years of age and on operators of other websites or online services that have actual knowledge that they are collecting personal information online from a child under 13 years of age.
- **Collaborative Filtering:** A recommendation system that analyzes user behavior to suggest products or services based on similar users’ preferences.
- **Computer Vision:** An AI technology that enables computers to recognize, classify, and process visual images, used in e-commerce for visual search and product recognition.
- **Customer Relationship Management (CRM):** Software helps organizations manage all aspects of their customer interactions and relationships.
- **Customer Retention:** Strategies and technologies, including AI, that focus on maintaining and enhancing relationships with existing customers to ensure long-term loyalty.

- **Data Literacy:** The ability to collect, analyze, and interpret data, crucial for making informed decisions in AI-driven marketing strategies.
- **Data Privacy:** The protection of personal data collected and processed by AI systems, ensuring compliance with regulations like GDPR and CCPA.
- **Ethical AI:** The practice of developing and deploying AI technologies in a manner that is fair, transparent, and free from bias, promoting corporate social responsibility.
- **General Data Protection Regulation (GDPR):** The European Union regulatory framework aimed at protecting personal data, emphasizing the need for transparency and consent in data collection processes.
- **Internet of Things (IoT):** A network of interconnected devices that collect and share data, which AI can analyze to provide personalized recommendations and predictive maintenance.
- **Marketing Automation:** Automated marketing strategies leverage AI technologies to automate and enhance marketing processes, such as enabling customer service processes using AI-powered chatbots and virtual assistants.
- **Personalization:** The application of AI to create tailored marketing messages, product recommendations, and customer experiences based on individual consumer data.
- **Predictive Analytics:** Employing statistical algorithms and machine learning to analyze past data and forecast future consumer behaviors, sales trends, and market changes.
- **Privacy-By-Design:** An approach to system design that incorporates data privacy and protection measures from the outset, ensuring compliance with regulations and consumer trust.
- **Supply Chain Management:** The use of AI to optimize logistics, inventory, and operations within the supply chain, improving efficiency and reducing costs.
- **Visual Search:** The use of AI and computer vision to allow consumers to search for products by uploading images, improving search accuracy and user experience.
- **Voice Search:** An AI-driven technology that allows users to search for products or information using voice commands through devices like Amazon's Alexa or Google Assistant.

## DISCUSSION QUESTIONS

- 1 How does AI enhance the efficiency and personalization of e-commerce marketing strategies, and what are some specific examples of these enhancements?
- 2 In what ways do AI-driven predictive analytics transform marketing strategies within e-commerce, and what benefits do they offer in terms of customer behavior forecasting and inventory management?
- 3 Reflect on the evolution of AI in e-commerce from the late 1990s to today. How have technologies like collaborative filtering and recommendation systems influenced the online shopping experience?



- 4 What are the key technical challenges faced by e-commerce companies when integrating AI, and how can these challenges be addressed to maximize AI's potential?
- 5 Discuss the ethical and privacy concerns associated with using AI in e-commerce. How can businesses ensure they are using AI responsibly while maintaining consumer trust?
- 6 How do AI-powered tools like chatbots and virtual assistants improve customer engagement and retention in e-commerce, and what are the potential drawbacks of these technologies?
- 7 Considering future advancements in AI, such as voice and visual search, how might these technologies further revolutionize e-commerce marketing, and what preparations should businesses make to adapt to these changes?

**TABLE 4.2** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>AI Wishlist</b>	<a href="https://wisepops.com/ai-wishlist">https://wisepops.com/ai-wishlist</a>	AI-made wishlists, product recommendations, "recently viewed items"
<b>Algolia</b>	<a href="http://www.algolia.com/">www.algolia.com/</a>	API-first search and discovery platform that enables e-commerce sites to deliver fast, relevant, and intuitive search experiences
<b>Nosto</b>	<a href="http://www.nosto.com/">www.nosto.com/</a>	AI-driven platform that creates personalized shopping experiences for e-commerce websites
<b>AdobeSensei</b>	<a href="https://business.adobe.com/products/sensei/adobe-sensei.html">https://business.adobe.com/products/sensei/adobe-sensei.html</a>	Leverages data analysis and GenAI to offer personalized product recommendations, predictive search functionalities, automated catalog management through image tagging and analysis, and personalized content and copy
<b>Klaviyo</b>	<a href="http://www.klaviyo.com/">www.klaviyo.com/</a>	Employs machine learning algorithms to sift through large datasets of customer information, including previous purchases, browsing habits, and interaction trends
<b>Salesforce Einstein</b>	<a href="http://www.salesforce.com/uk/artificial-intelligence/">www.salesforce.com/uk/artificial-intelligence/</a>	An integrated set of AI technologies that makes Salesforce Customer Relationship Management applications smarter
<b>Jasper</b>	<a href="http://www.jasper.ai/">www.jasper.ai/</a>	Personalized marketing copy creation automation, based on your style, target customer, and goals
<b>Lyro by Tidio</b>	<a href="http://www.tidio.com/chatbot-ai/">www.tidio.com/chatbot-ai/</a>	AI-powered chatbot for customer engagement and 24/7 support
<b>GrammarlyGO</b>	<a href="http://www.grammarly.com/">www.grammarly.com/</a>	AI-powered writing assistant for error-free content

**TABLE 4.2** (Continued)

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Plerdy</b>	<a href="http://www.plerdy.com/">www.plerdy.com/</a>	Harnesses a wide range of metrics, offering insightful conversion rate optimization (CRO) advice to boost conversion rates and optimize user interaction
<b>Surfer AI</b>	<a href="https://surferseo.com/ai/">https://surferseo.com/ai/</a>	SEO tool designed to help businesses and content creators boost their website's search engine rankings through data-driven analysis
<b>Synthesia</b>	<a href="http://www.synthesia.io/">www.synthesia.io/</a>	AI-generated captivating videos for marketing
<b>Midjourney</b>	<a href="http://www.midjourney.com/">www.midjourney.com/</a>	Create images for marketing by describing them
<b>Drift</b>	<a href="http://www.drift.com/">www.drift.com/</a>	Enables real-time, personalized conversations through chatbots
<b>MarketMuse</b>	<a href="http://www.marketmuse.com/">www.marketmuse.com/</a>	AI-powered content planning and optimization platform that helps eCommerce and other businesses enhance their content strategy for better SEO and audience engagement

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.

**FIGURE 4.6** QR Code to Online Support Material

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# AI-Driven Branding

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## LEARNING OBJECTIVES

Readers will be able to:

- 1 Identify key roles AI plays in consumer-brand relationships.
- 2 Explain how technological advancements are transforming consumer-brand relationships.
- 3 Apply strategies to adapt to marketplace changes.
- 4 Analyze the impact of AI's integration into brand management on the dynamics of consumer-brand relationships.
- 5 Evaluate different strategies for incorporating AI into brand operations.
- 6 Create a comprehensive plan for brand management by integrating essential AI and consumer-related factors.

## INTRODUCTION TO AI IN BRANDING

Decades of academic research and managerial experience have led scholars and business executives to recognize two important insights. First, brands are invaluable assets, yet developing brands poses numerous challenges. Second, understanding and shaping consumer reactions are crucial for successful brand management. These insights have guided both practitioners in their branding activities and scholars in creating branding frameworks. However, over the past decade, the technological revolution has significantly reshaped the daily experiences of consumers and their interactions with brands. One of the biggest opportunities and challenges that both brand managers and consumers face in the marketplace is artificial intelligence (AI). Nowadays, AI takes multifaceted roles backstage, encompassing data collection, classification, recommendation, dynamic pricing, and



targeting while also having a visible presence on the front end, interacting with consumers as brand representatives.

Think about your experiences with brands using AI in your daily routine. For instance, the Apple Watch tracks your sleeping routine and daily activities, reminding you to stand up or drink water. Google Maps informs you about the optimum route and traffic and where you have parked your car. Spotify recommends new songs based on the albums you liked and tells you about the concerts nearby; Netflix recommends movies and reminds you to continue watching the series you haven't watched for a while. Amazon makes predictions about your potential interests. Target could even predict whether a customer is pregnant by analyzing the purchasing patterns of its customers (Duhigg, 2012). In addition to the products or services offered for your future use, the available offers can be adapted to you based on the devices you use. For instance, orbitz.com displayed more expensive hotel options for consumers who used Mac computers as opposed to PC counterparts since Mac users could spend 30% more for a night at a hotel (Mattioli, 2012). All these brands, and many more, use AI for data collection, prediction, and behavioral targeting purposes and make investments to improve their predictive abilities.

Recently, some brands have also integrated Generative AI (GenAI) into their operations. Using automated prompts or large language models (LLM), chatbots respond to customers' questions or requests or even take orders, facilitating online and in-store experiences. In a rapidly evolving marketplace that is dominated by AI-based practices, brands need to understand how consumers react to it. In the last decade, consumer behavior research has demonstrated that individuals are reluctant to use AI for the tasks that are typically performed by humans, referred to as algorithm aversion (Castelo et al., 2019; Longoni et al., 2019). This aversion can be driven by individual differences, algorithm and task characteristics, or higher-level factors related to the organizations, society, environment, and culture (Mahmud et al., 2022). However, researchers have also identified conditions under which people become as likely to rely on AI as humans. For instance, when algorithms take individuals' uniqueness into account and provide personalized services (Longoni et al., 2019), when the task is perceived as objective (Castelo et al., 2019), and when the consumption is driven by the functional benefits (Longoni & Cian, 2022), algorithm aversion is eliminated.

Regardless of consumers' aversion to or appreciation of algorithms, we observe a "the more, the better" approach with the ongoing technological transformation in the marketplace. Each day, consumers are exposed to a new form of AI in their interactions with brands, including new agents and features. Despite their concerns or reluctance, consumers are asked or even forced to interact with AI as an agent, provide inputs to AI, or process information provided by AI. The challenge in this landscape, characterized by novelty and uncertainty, lies in the limited knowledge of both the short- and long-term impacts of integrating AI into brand operations. This chapter provides a strategic overview of the recent research in the field. More specifically, we focus on the different roles that AI predominantly takes in the marketplace, discuss recent findings from a branding perspective, and elaborate on their implications for the future of consumer-brand relationships. We acknowledge that the biggest challenge of writing this chapter is rooted in technology and innovation. Every day, the capabilities of AI advance, the number of roles it takes increases, the type of tasks it completes varies, and the extent to which it is deployed in

brand management enhances. However, the implications of the extant research provide a roadmap into the primary opportunities and challenges that the world of branding faces in the near future.

## CONSUMER INSIGHTS AND STRATEGIC IMPLICATIONS

Every day, AI is embedded with new capabilities that facilitate the use of it in various settings. How is AI being employed in the marketplace? Research suggests that currently, AI has two main roles: 1) Interaction partner and 2) decision-maker.

### AI as an Interaction Partner

Over recent years, many industries have started employing AI to provide customer service (Dass, 2017; Nguyen, 2016). Service bots are autonomous systems that interact and communicate with customers, delivering service to them in line with their needs (Wirtz et al., 2018). These service bots can take various forms, from physical robots to digital chatbots. Rapid integration of service bots into brand operations, especially during the COVID-19 pandemic to reduce interhuman contact (Lee, 2021), has made AI the agent through which consumers share information, have an ongoing conversation, or receive information. Since conversation requires collaboration between two parties, the nature of a conversation consumers have with AI-powered brand representatives has important consequences for the relationship they form with brands. How does incorporating AI influence consumer-brand relationships? Recent research suggests that deploying AI to provide service can significantly benefit brands.

#### Application 5.1 Customer Experience Design

**Task:** Simulate brand-customer interactions using an AI chatbot to identify the best prompts that can enhance customer loyalty and brand perception.

##### Instructions

Imagine you are the marketing manager of a multinational company operating in the luxury fashion industry. To increase the efficiency of operations, you would like to integrate a chatbot into customer service operations. You need to identify how AI should address customers' inquiries. Consider the brand's identity, values, and target audience. Use a chatbot like ChatGPT to simulate responses for one of the following customer queries:

- Product inquiry
- Shipping issue
- Return policy

Write two to three responses that reflect the brand's identity. Ensure the tone is consistent with the brand's values. Consider how your responses impact customer loyalty and brand perception. Reflect on how the language used by the chatbot would make the customer feel and whether it strengthens brand loyalty.

First of all, it can influence what consumers think about the brand. More specifically, Castelo et al. (2023) suggest that the integration of service bots can influence the inferences consumers make about the companies. Consumers evaluate the service provided by AI-based service bots more negatively, even when it is identical to the service provided by humans. This effect is driven by what consumers think about companies' motivation behind using service bots. They think that cost-cutting motivations drive companies' use of service bots. At the expense of customer experience, such as providing high service quality, companies are motivated to save money through automating their service. Highlighting how automation can provide benefits to consumers can improve consumers' attitudes. This finding highlights the importance of communicating how the integration of AI can provide benefits to consumers.

Focusing on the nature of the interaction, Bergner et al. (2023) showed that embedding fundamental properties of a human dialogue into an AI-based conversational interface can lead to positive outcomes for brands. When AI-powered interfaces take turns in a conversation, initiate turns, and signal that they have received and understood the customers' message, they are perceived as more human (Bergner et al., 2023). The perceived humanness of the AI interface can influence how consumers construe their relationship with the brand. More specifically, it can create a bond characterized by mutual understanding and care, referred to as *brand intimacy* (Thorbjørnsen et al., 2002). This results in a greater willingness to follow brand recommendations, pay a premium price for the brand offerings, advocate the brand to others, and increase brand loyalty. This finding highlights the importance of mimicking interhuman interactions in designing interactions with AI. As brands make the nature of conversations that consumers engage in with AI similar to the way they interact with humans, they will have better outcomes.

## Application 5.2 Customer Interaction Design

**Task:** Identify the best conversational elements to design customers' interactions with brands

### Instructions

Select a well-known brand (e.g., Nike, Starbucks, Apple) and identify its target audience and overall brand identity (e.g., energetic, friendly, professional).

Use ChatGPT to create three different versions of a new product launch for this brand:

- One in a friendly and casual tone.
- One in a professional and formal tone.
- One in a humorous tone.

Compare how each tone affects the perception of the brand's message. Consider which tone aligns best with the brand's identity and how it might influence customer engagement.

Write a short reflection on the importance of consistent tone and voice in branding. How do linguistic characteristics impact customer perception and brand loyalty?

Focusing on an information disclosure setting, Lefkeli et al. (2024) showed that disclosing information to AI as opposed to humans decreases consumers' trust in brands. This negative effect is driven by inferred audience size. Since consumers do not consider AI a social counterpart, they anticipate the presence of other parties operating behind AI. The inferred large audience increases their sense of exploitation, decreasing their trust in brands. Importantly, these results imply a change in how brands gain the trust of consumers and the crucial role of AI in this process. Brand trust has been conceptualized as an asset built over time through achieving high satisfaction in multiple interactions (Albert & Merunka, 2013). Studies showed that trust leads to information disclosure (Dinev & Hart, 2006; Hoffman et al., 1999). However, this research suggests that disclosure can influence consumer's trust in brands. In customer interaction design, brands should carefully tailor the contextual elements that can affect the extent to which consumers consider the brand a reliable and trustworthy interaction partner. Since disclosure triggers one's considerations about the audience, brands should incorporate cues signaling the confidentiality of the information into the interaction. Further, increasing the human likeness of the AI can mitigate the effect.

The product types can also influence consumers' reactions while communicating with AI. Jin et al. (2024) showed that while purchasing embarrassing products, the features of an AI-powered chatbot can influence consumers' responses. While consumers respond more positively when the chatbot's identity is clearly communicated as a mechanical agent, they react more negatively when there is an ambiguity about whether the chatbot is a mechanical agent or managed by humans. Further, making the chatbot more humanlike may harm consumers' responses. While humanizing AI could benefit companies in various settings, it might backfire when consumers are concerned about their impression.

These findings suggest that brands should carefully design the interaction setting and consider the user experience. Based on the nature of the interaction (e.g., information disclosure, information acquisition, interactive chat), the attributes required to be integrated into AI may also change. While AI may mimic interpersonal communication or act in a way that can be perceived as similar to humans in certain contexts, it may not be the case in others. Brand managers should carefully analyze the brand offerings, the purposes of customers' interaction with AI, and their relationship with the brand.

## AI as the Decision-maker

AI is increasingly employed in customer touchpoints; however, there are other roles it takes in the marketplace. Firms also use AI in decision-making tasks. How do consumers respond to AI's decisions?

Yalcin et al. (2022) found that the outcome of decisions affects how consumers react to AI versus human decisions. For example, when AI makes a favorable decision, consumers respond less positively compared to when a human makes the same decision. This happens because consumers are more likely to see a human's favorable decision as a reflection of their own personal qualities. In the marketplace, AI might be employed to decide whether a consumer's loan application is approved, they are admitted to a community, or they are shortlisted as a job candidate. The outcomes of these decisions might influence how people feel about themselves, which may affect their attitudes toward brands.

Consumers' reactions to the decisions made by AI can also be influenced by their expectations and how these expectations are met. Garvey et al. (2023) showed that consumers respond more positively to AI (as opposed to a human) when the offered products are worse than consumers' expectations. On the other hand, consumers react more positively to humans or human-like AI when the offered products are better than expected. Since AI is attributed to lower levels of selfish or benevolent intentions than humans, consumers respond mildly. However, making AI more humanlike leads to the attribution of intentions, which moderates the effect. This finding suggests that AI should be presented as more humanlike or machinelike based on whether the offer is worse or better than consumers' expectations.

Brands can also integrate AI into product design processes. In recent years, Gucci designed its first virtual sneaker, Acne Studios created a special collection for men led by AI, and BMW used AI while developing innovative designs. AI will be increasingly deployed in the product design and development process in the near future, but what are the outcomes of this practice? Focusing on the luxury industry, Xu and Mehta (2022) showed that it can change the brand's perceived value. Using AI in designing products decreases emotional value while increasing the functional value of the brand. If a luxury brand's meaning is strongly associated with its customers' emotional value, as in fashion brands, incorporating AI into the design process makes consumers think the brand is losing its essence. This, in turn, negatively influences consumers' attitudes toward the brand and decreases their purchase intention. However, if functional values lie in the essence of the brand, as in the case of luxury automobiles, the negative effect of using AI in design attenuates.

### CASE STUDY 5.1

#### Hasbro Trivial Pursuit Infinite

Visit [www.trivialpursuit.com/](http://www.trivialpursuit.com/) and [www.forbes.com/sites/joanverdon/2024/01/04/hasbro-launches-ai-powered-version-of-trivial-pursuit-game/](http://www.forbes.com/sites/joanverdon/2024/01/04/hasbro-launches-ai-powered-version-of-trivial-pursuit-game/)

Hasbro has recently developed Trivial Pursuit Infinite. Using AI to generate questions depending on players' interests, Hasbro has updated its current product offering and provided more personalized challenges to the players.

Do you think players enjoy such a customization? Would giving an option to the players to play any time they want on any topic they desire make players more or less competitive? Focusing on the customer experience, what could be some of the advantages or disadvantages of customizing the topics covered in this game? Focusing on brand performance, what could be some of the advantages or disadvantages of using AI to enhance products that already have a fan base?

Another role AI takes comes from the tourism industry. Companies use AI to analyze relevant data (e.g., historical booking data, current reservations) to estimate consumers' demand accurately and set optimal prices (Schwartz et al., 2016). Various market conditions can lead to a fluctuation in prices for the same or similar products (McAfee & te Velde, 2006), and the use of AI can facilitate the changes in pricing the offered service. Choi et al. (2023) showed that providing information about AI's involvement in pricing can increase the perceived fairness of the price. As a result, consumers may respond less negatively in the context of disadvantaged price change. Increasing the human likeness of the algorithm makes consumers perceive the price change as more unfair.

These findings have important implications for brand managers. First of all, brands should critically analyze whether consumers will be better or worse off due to the decisions made by AI. This can depend on the nature of the task (e.g., product recommendation, product return applications, product development) or the capabilities of AI. However, highlighting the fit between the nature of the decision-making task the brand engages in and the associations consumers have about AI can improve consumers' experiences and their reactions to the brands. Rather than simply promoting the inclusion of AI into the decision-making stage, brands should communicate their underlying motivation for doing it. Transparency is another critical element that plays a vital role in determining consumers' responses. While communicating with consumers, brands should provide information about the extent to which AI is involved in decision-making.

Further, brands should consider their brand personality and deploy AI as a decision-maker accordingly. If the brand is associated with sincerity or sophistication, involving AI in decision-making may not be desirable. However, it might be better for brands associated with competence if they clearly communicate how AI can contribute to their competence. In addition to brand personality, brand positioning can influence how brands should deploy AI in decision-making tasks. For instance, if the competitors in the marketplace extensively incorporate AI into decision-making, brands may consider the involvement of human agents as a point of differentiation. In other words, rather than focusing only on the capabilities of AI, brands should carefully analyze their core branding elements before making a technological transformation in their branding operations.

Although the deployment of AI in various tasks is prevalent in the marketplace, it does not mean that AI failures do not occur. These AI failures can have reputational costs for brands. In a survey, 78% of the chief marketing officers reported their concerns about the threats AI failures posed to the reputation of their brands (Vizard, 2017). Do consumers respond negatively to the brand when AI causes a crisis? Srinivasan and Sarial-Abi (2021)

showed that this might not be the case. Consumers react less negatively to a brand harm crisis caused by AI than by humans. This is driven by how consumers perceive the capabilities of AI. Since AI is not considered an agent that is as capable as humans in thinking (i.e., agency) and feeling (i.e., experience), AI is attributed to lower levels of responsibility for the harm. However, the characteristics of the AI and task can influence consumers' responses. Consumers respond more negatively to human-like AI or machine-learning algorithms since these features signal an advanced level of agency and responsibility. When AI is deployed in subjective tasks that require intuition or in interactive tasks, consumers expect more "humanness" from the algorithm and attribute higher levels of agency. This, in turn, leads to more negative responses upon failure.

These findings, once again, highlight the importance of understanding how humans perceive AI. Since AI is a new agent in the marketplace, consumers tend to anchor on their interhuman communication experiences and make adjustments from them. The extent to which consumers attribute certain capabilities to AI and expect "humanness" from it can shape their responses to brand crises. Although, in this case, brand failures caused by AI were perceived as less harmful, it is important to note that these instances may influence how people construe AI as an agent. Since they already attribute lower levels of mind to AI compared to humans, these failures can reinforce this association and increase their reluctance to use services provided by AI. Considering the extensive integration of AI into branding operations, this may have more negative consequences in the long run. In crises, it might be better for brands to take more responsibility than putting it on AI's shoulders.

## TRENDS, CHALLENGES, AND FUTURE DIRECTIONS

AI has already started taking many roles in the marketplace, substituting or assisting humans in marketing operations, and it is expected to have a prominent role in the near future. To what extent should AI be integrated into brand management?

### Building New Brands

The introduction of Generative AI (GenAI) platforms has drastically changed how consumers or companies think about the creative process (Inman et al., 2024). The rapid advancements in GenAI technologies will soon be adopted into brand-building activities. Especially for new brands, GenAI can be used for designing logos, generating brand names, slogans, and voice, creating a brand identity, identifying the major competitors in the market, and developing the ideal positioning strategy for the brand. For instance, Briefly is a GenAI platform that helps marketers create briefs that align with the brand's strategic goals and key priorities. Focusing on planning, problem-solving, research, analysis, and strategy, StratGPT generates "strategies for everything." Pencil designs ads "that work" and aims to increase productivity and performance. The use of GenAI is not only the future of branding but also a part of the current state of branding. There is no doubt that GenAI tools will assist brand managers in building and managing brands and will be adopted by the majority of brands soon. However, in a marketplace where all brands use GenAI, how can brands differentiate themselves from the competitors? While incorporating AI creates



additional value for brands, having a human touch will make a difference in the near future. Rather than delegating tasks to AI, brand managers should improve their skills in giving the correct input to AI, interrupting the design process, and shaping the final output provided by AI. In other words, rather than delegating tasks to AI, brand managers should learn to collaborate with AI to achieve their goals.

### Application 5.3 Design Branding Elements

**Task:** Design a new brand using GenAI platforms

**Instructions:** Imagine you would like to design your own brand.

First, pick one of the following industries:

- Smart home (e.g., high-tech appliances, internet of things).
- Sustainable energy solutions (e.g., solar panel systems, wind energy technology).
- Online platform (e.g., learning a language, finding a romantic partner, social media platform).
- Sharing economy (e.g., renting an apartment, using new transportation).

Then, using GenAI tools,

- Identify your target market and brand benefit, and position your brand with respect to the competitors.
- Write a positioning statement.

Develop brand elements (e.g., brand name, brand logo, brand values, and brand visuals such as print ads or social media campaigns).

## Managing Brands

AI can successfully perform numerous tasks when integrated into brand management; however, there are some challenges that brand managers should take into account.

### Technical Challenges

Brands have been going through a technological transformation. Some brands use AI for personalizing product recommendations and increasing the fit between what consumers want and what the brand offers. For instance, Sephora asks consumers to complete a survey and provide information about the brand, product, and formula they have used. Based on their preference history, Sephora recommends products. Taking one step further, Sephora collaborated with Pantone to create handheld scanners that are used on customers' skin to accurately identify their skin tone using AI (Berkowitz, 2012). Using AI for product recommendation has become a practice that brands have employed more frequently. Through collecting self-report data, using bodily measures, or integrating



behavioral measures, brands can improve their efficiency in personalization. However, this requires investment in R&D departments and keeping the rest of the branding team up to date about current advancements in technology that brands could leverage.

## Customer Challenges

These AI-powered personalization practices can also increase customers' expectations of products and brands. The product recommendations are based on personal information acquired through passive data collection or voluntary disclosure, which can increase the anticipated product efficiency. For instance, as in the case of Sephora, consumers may expect a perfect match of the concealer tone with their skin tone after providing a shopping history and skin scan. Any deviation from the anticipated product performance can result in negative brand outcomes.

Further, consumers may feel known by the brands due to these interactions based on personal information, increasing their self-brand connection. However, any failure in this interaction resulting from technical infrastructure may harm brand equity. It is important to note that technological transformation is an ongoing process that requires the enhancement of technical capabilities and transforming the nature of customer-brand relationships.

Some brands use AI to shape product development. Gap has become one of the pioneers in using data analytics to predict customer tastes (Israeli & Avery, 2017). Having a data-driven approach, the former CEO of Gap, Art Peck, dismissed the creative team during his leadership and incorporated a data-driven creative process. This model used sales and customer databases as well as social media and Google trends to make fashion predictions. These predictions would be used to develop product assortments and forecast price and quantity. Gap already used data to identify the products to reorder based on sales data. What is revolutionary in this model is shaping the development of new products based on big data. Can brands use big data to develop new products and shape consumer preferences? Perhaps they can, but Gap could not. There was a decline in sales, which resulted in a change in the top management team and a more balanced approach. These cases highlight the importance of identifying the optimum stage to integrate AI into branding operations. These decisions should consider the brand features (e.g., market leaders, followers, new brands, loved brands), the characteristics of the task (e.g., retargeting, product recommendation, product development, customer service), and the features of the AI.

Although predicting consumers' tastes in the fashion industry based on big data might have been challenging, there are many ways to use AI tools to gain more insights into brand performance. For instance, brands can use AI tools to collect and analyze textual, visual, or audio data to better assess their performance in the marketplace. Rust et al. (2021) analyzed comments on Twitter for the world's top 100 brands and developed a brand reputation tracker based on Rust-Zeithaml-Lemmon's value-brand-relationship framework (Zeithaml et al., 2001). The authors show that it is possible to capture the voices of different stakeholders on social media in real time and have better and more accurate insights about the brand reputation. Similarly, Dhaoui and Webster (2021) explored consumer-brand engagement on Facebook. Exploring 2,740 brand pages on Facebook from 25

industries, Dhaoui and Webster showed that, compared to the volume of the brand posts, the quality and design of the posts matter more. Conversations on the brand pages should be monitored, and marketers should intervene. Marketers are recommended to respond to consumers' comments quickly, but taking time to craft the messages effectively could be a better strategy. Since there is a vast amount of information, either voluntarily shared by consumers on social media or indirectly collected through data recording practices, brand managers should improve their skills to learn from data. Similar to the authors' approach, brands should aim to gain insights with the help of text, audio, and image mining tools to better understand their perception in the marketplace.

## Data Challenges

AI's potential to change the branding landscape brings about many important issues about data. One of the issues is the use of available data in developing AI tools. Developing AI systems typically involves training the models on available data, posing two challenges. First, the available data already includes human biases, and historical and social inequalities. Training AI based on historical data can reflect and reinforce these biases, which can negatively affect consumer-brand relationships and harm the company's image and reputation. Second, the training data may not be owned by firms; instead, it can involve copyrighted work produced by artists, writers, and creators. Fairness in this practice may depend on the circumstances of each case; however, developing AI tools by feeding data that belong to other parties may require consent and compensation from the original source of data.

Further, the ownership challenge may not only be limited to the copyright issues of the professionals but may also include consumers. From consumers' point of view, the collection of personal data blurs the boundaries of data ownership. Although it has become a valuable resource for brands, the intangibility of this resource and uncertainties related to the collection and use of data during their interaction with brands make it more challenging for consumers to feel ownership over their personal information. This can lead to a desensitization to the extent of data collection and a loss of ownership over one's personal information.

Another potential outcome could be that consumers' awareness of mass data collection practices could harm the self-brand connection. Providing extensive personalized services to all consumers, brands aim to create and enhance their bonds with existing and new customer bases. However, knowing that data related to all consumers in the marketplace that could be similar or different to oneself is being collected can decrease how much people think the brand values them. In some contexts, companies' use of one's data may lead to a sense of exploitation. Brands profile consumers with similar interests, values, and lifestyles, referred to as psychographic targeting. This involves using a consumer's data to target others. The more knowledgeable consumers become about how AI collects data and targets them based on their similarities or differences with others, their consumption history, or their online behavioral patterns, the more exploited they may feel. A brand's reputation could influence these potential outcomes, consumers' existing relationship with the brand, the sensitivity of the information, or the benefits they get in return for their data. This leads to another major issue: Privacy. Consumers are becoming increasingly concerned about their privacy; they even think that they are being observed by companies

even when there are no explicit cues that can trigger this perception (Lefkeli et al., 2022). With the implementation of the General Data Protection Regulation (GDPR), companies must ask for permission before collecting consumer data. Although these privacy notices are supposed to increase consumer empowerment, Brough et al. (2022) showed that consumers' trust in the company and willingness to purchase a product decreases. Consumers who think that companies are observing them are more sensitive to the data recording practices, influencing the extent to which they disclose data or how much they trust the brand (Lefkeli et al., 2022). Although extensive data collection through AI tools has become the default in the marketplace, brands should be careful in managing their customer relationships since they might be sensitive to these practices. Informing consumers about the extent of data collection and designing user-friendly privacy notices can help brands maintain their relationships without making consumers averse.

### Promotion Challenges

Since AI is receiving popularity from different stakeholders, some companies can use it as a marketing technique and exaggerate the extent to which they use AI in their operations, referred to as AI washing. In 2024, two investment advising companies (Delphia and Global Predictions) were charged by the Securities and Exchange Commission (SEC) for making false and misleading statements about using AI in their operations and served with a fine of \$400,000 (Wigglesworth, 2024). AI may capture a wide range of technologies, from statistical models to smart agents. Incorporating AI into operations may not always provide benefits to companies or consumers. Further, brand managers should be aware that consumers may have different associations with the term AI based on the limits of their prior experience. Rather than considering AI as something that provides additional value to consumers, brands should critically assess the capabilities of their technology and communicate it with their customers.

### Brands' Influence on AI Adoption

Research shows that the integration of AI can influence consumers' inferences about brands, their offerings, and their interactions with them. But do brands influence consumers' responses to AI?

When entering a new market, companies typically use brand extension strategies to leverage the brand equity of the parent brand (Völckner & Sattler, 2006). Eggers and Eggers (2022) explored whether brand extension could lead to favorable outcomes in the car and autonomous vehicles industry. Most survey participants reported that they would prefer a manually driven car over an autonomous vehicle manufactured by an unknown brand. However, if the autonomous car was manufactured by Tesla, they would even be willing to pay a price premium. A more thorough analysis reveals that when consumers consider renting a self-driving car, new brands are as effective as automotive brands. In the rental market, highlighting how the extension aligns with the parent brand helps the new brands the most, while brands already operating in the automotive industry are less sensitive to these brand associations. Users' previous positive experiences help the technology brands the most because they increase the perceived capability of the brand in creating an extension.

On the other hand, when consumers consider purchasing a self-driving car, they prefer the ones manufactured by automotive brands more than new brands in the market. Positive parent brand experiences increase consumers' preference for automotive brands. This finding suggests that the success of brand extensions in the autonomous vehicle industry is influenced by the nature of the consumption (e.g., rent or purchase), the type of brand and its fit with the autonomous vehicles, and the type of associations that are made salient. In other words, brands may not always provide a safety net for new products developed with AI technologies.

## CASE STUDY 5.2

### GE Flavorly AI

Visit <https://pressroom.geappliances.com/file/flavorlyai?action=> and [www.youtube.com/watch?v=F-0Wajt1OKI](https://www.youtube.com/watch?v=F-0Wajt1OKI)

GE has developed Flavorly AI, a recipe generator using GenAI tools. Flavorly AI creates personalized recipes based on the food preferences of consumers and available ingredients in the refrigerator.

Do you think this AI-powered tool would be copied by competitors? Is this a sustainable competitive advantage? What are the potential benefits or damages for brand equity?

## CHAPTER SUMMARY

In this chapter, we have provided an overview of the recent findings in the consumer-technology interaction research with an intentional focus on branding, as well as shedding light on the AI-powered services available in the marketplace that can be integrated into brand management. Since the market is evolving with the ongoing technological transformation, brand managers should be agile in responding to changes, critically assessing their brands' positive and negative outcomes in line with the values they offer to consumers and integrating them into the brand operations.

### KEY TERMS

- **Algorithm:** Is used to solve a specific problem, often described as a sequence of steps to solve a specific problem. To achieve this goal, it is crucial to replicate human cognition and functions that involve learning and problem-solving and provide a set of rules to an AI program to assist it in independent learning.
- **AI Washing:** A marketing tactic companies may employ to exaggerate the extent to which AI technologies are incorporated into their operations

- **Algorithm Aversion:** Consumers' reluctance to use AI for the tasks that are conventionally performed by humans.
- **Artificial Intelligence:** The technology that enables computers and machines to simulate human intelligence and problem-solving capabilities.
- **Generative Artificial Intelligence:** Advanced algorithms that can be used to create new content, including audio, code, images, text, simulations, and videos.
- **Large Language Models:** AI systems capable of understanding and generating human language by processing vast amounts of data.
- **Machine Learning:** A method of data analysis that allows a system to learn over time by analyzing patterns from prior experience.

## DISCUSSION QUESTIONS

- 1 Which AI tools do you use regularly? Now think about this time, last year. Which of them were (not) available for your personal use? Compared to last year, which of them have you started using more frequently? Why?
- 2 Think about your interactions with brands. Choose three brands that use AI as an interaction partner. Explain how AI performs and comment on each of them based on your personal experience as a consumer. Identify the ways that the brands can improve how AI operates.
- 3 This time, choose three brands that use AI as a decision-maker. Explain how AI performs and comment on each of them based on your personal experience as a consumer. Identify the ways that the brands can improve how AI operates.
- 4 Do you think AI would be more useful for brands in predicting or shaping consumer preferences? Why?

**TABLE 5.1** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Briefly</b>	<a href="http://www.brieflyai.com/">www.brieflyai.com/</a>	Briefly is a GenAI platform that helps marketers create briefs that align with the brand's strategic goals and key priorities.
<b>StratGPT</b>	<a href="https://chatgpt.com/g/g-GHU9fWyhR-stratgpt-generate-strategies-for-everything">https://chatgpt.com/g/g-GHU9fWyhR-stratgpt-generate-strategies-for-everything</a>	StratGPT is a GenAI platform designed to provide assistance in various stages of generating a strategy for anything.
<b>Pencil</b>	<a href="http://www.trypencil.com/">www.trypencil.com/</a>	Pencil is a GenAI platform designed to generate ads for increasing productivity and performance.

TABLE 5.1 (Continued)

Resource	URL	Description
<b>Sephora “Find My Shade”</b>	<a href="http://www.sephora.com/beauty/foundation-shade-finder">www.sephora.com/beauty/foundation-shade-finder</a>	Sephora launched the “Find My Shade” page to collect data on consumers with the goal of providing the best makeup foundation suggestions to their customers.
<b>Sephora + Pantone Color ID</b>	<a href="http://www.fastcompany.com/1681451/sephora-pantone-color-iq-knows-your-skin-tone-better-than-you-do">www.fastcompany.com/1681451/sephora-pantone-color-iq-knows-your-skin-tone-better-than-you-do</a>	Collaborating with Pantone, Sephora created handheld scanners to scan customers’ skin with the goal of accurately identifying their skin tone using AI.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



FIGURE 5.1 QR Code to Online Support Material

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# Navigating International Marketing with Artificial Intelligence

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## LEARNING OBJECTIVES

Readers will be able to:

- 1 Discuss the scope of tasks involved in international marketing.
- 2 Discuss how artificial intelligence (AI) can help international marketers.
- 3 Illustrate the usage of AI in international marketing.
- 4 Discuss how small and medium-sized enterprises (SMEs) can use AI for their international marketing efforts.
- 5 Explain how to write prompts for the best results.
- 6 Debate potential problems and challenges in using AI for international marketing.

## INTRODUCTION

Artificial intelligence has become a topic de jour in marketing literature. Expected to transform industries and business practices worldwide and seen as a paradigm shift, it draws massive interest from industry practitioners and academics (Huang & Rust, 2021). Pondering the impact of AI on international marketing, including its potential to revolutionize branding and marketing communications on a global scale, this chapter aims to provide insights into leveraging AI-based tools for competitive advantage in international markets, mainly focusing on opportunities for small and medium-sized enterprises, where, on some level, AI tools have the potential to level the playing field and significantly reduce

the barriers to entry. We also address potential challenges such as language barriers, data compatibility issues, political and legal complexities, ethical considerations, cultural sensitivity, and adaptation issues.

AI has emerged as a transformative force in marketing, fundamentally reshaping how businesses engage with consumers and craft their strategies. It is thought to revolutionize industries by enhancing the customer experience through personalization and automation (Huang & Rust, 2021), provide opportunities for significant improvements to decision-making processes and operational efficiencies (Kaplan & Haenlein, 2019), and transform marketing capabilities by enabling more targeted, efficient, and effective marketing interventions (Davenport et al., 2020).

AI can be described as an intelligent agent that gathers information from environmental precepts to perform actions (Russell & Norvig, 2020). It could also be explained as a program that picks out sets of words (or images, etc.) most statistically likely to correspond with the words in the request, as trained by a large amount of data. Even as they are still being perfected, such technologies offer unprecedented opportunities for customization, automation, and efficiency in various areas. This chapter is particularly interested in such improvements and applications in international marketing.

We will start by discussing marketing in general and international marketing and its unique challenges in particular. We then review AI systems and explain how they can help the various facets and stages of global marketing, followed by practical tips and challenges. We will also discuss the opportunities and challenges AI systems present to SMEs.

## MARKETING AND INTERNATIONAL MARKETING

### Marketing

Marketing, in its broadest sense, involves identifying, anticipating, and satisfying customer needs profitably. It encompasses a range of activities to promote and sell products or services, including market research, product development, pricing, distribution, and promotion. The primary goal of marketing is to create value for customers and build strong customer relationships to capture value in return (American Marketing Association, n.d.).

Key aspects of marketing include:

- 1 **Market Research:** Gathering and analyzing consumers' needs, preferences, and behaviors (Dichter, 1947).
- 2 **Product Development:** Designing and creating products that meet target markets' needs.
- 3 **Pricing Strategies:** Setting prices that reflect product value while being competitive in the market.
- 4 **Distribution Channels:** Ensuring that products are available to customers through the most efficient channels.
- 5 **Promotion:** Communicating product benefits and features to the target audience through advertising, sales promotion, public relations, and personal selling (McCarthy, 1964).

As with any business process, marketing management moves through the cycle of situation analysis and insight generation, planning, implementing the plans, and evaluation. Regarding information flows, the inputs are the information about the marketing micro and macro environment, starting with the target customers and including reactions of customers, competitors, and other stakeholders to the marketer's activities. Outputs include marketing plans, promotional materials, customer service scripts, etc.

## International Marketing

International marketing extends the principles of marketing beyond national borders. It involves the planning and conducting of transactions across multiple countries to create exchanges that satisfy the objectives of individuals and organizations on a global scale. This field considers the complexities and opportunities that arise when marketing in different cultural, economic, and regulatory environments (Cateora et al., 2019).

Key aspects of international marketing include:

- 1 Market Research in International Contexts: Understanding consumer behavior, market conditions, and competitive landscapes in different countries (Kotabe & Helsen, 2020).
- 2 Product Adaptation: Modifying products to meet the diverse needs and preferences of international customers (Czinkota & Ronkainen, 2013).
- 3 Pricing Strategies Across Borders: Setting prices that consider local economic conditions, competition, and perceived value in various markets (Cateora et al., 2019).
- 4 International Distribution and Logistics: Developing efficient channels to move products from producers to consumers in various countries, considering factors like transportation, tariffs, and local distribution networks (Keegan & Green, 2020).
- 5 Cross-Cultural Promotion: Crafting messages that resonate with local audiences and using appropriate media channels to communicate effectively in different cultural contexts (Terpstra et al., 2012).

Essentially, international marketing adds an extra layer of complexity to marketing, as we need to find, interpret, understand, and translate into action information about a foreign market and business environment, starting possibly with a different language, culture, data format, laws, and ways of conducting business. These added complexities are sometimes described via additional frameworks. For example, there is the 7-P framework for international marketing, in which they are cleverly arranged into 7 Ps (Potential, Path, Process, Pace, Pattern, Problems, and Performance) (Paul & Mas, 2020). Many of the international marketing strategies, processes, and tasks in the digital area are heavily intertwined with information technologies (Katsikeas et al., 2020). As will be discussed in this chapter, AI systems are used in each of the key aspects.

Thus, while marketing and international marketing share fundamental principles, the latter involves additional complexities and considerations due to global markets' diverse and dynamic nature. International marketers must navigate cultural differences, regulatory environments, and economic conditions to reach and engage consumers in multiple countries effectively. Often, they have to engage local agents and business intermediaries

**TABLE 6.1** Differences Between Marketing and International Marketing

	<i>Marketing</i>	<i>International Marketing</i>
<b>Scope and Complexity</b>	Marketing typically focuses on domestic markets and involves understanding and addressing customer needs within a single country. The scope is generally narrower and less complex.	International marketing involves multiple countries, each with its own cultural, economic, and regulatory environment. The complexity increases as marketers adapt strategies to fit diverse market conditions and consumer behaviors (Czinkota & Ronkainen, 2013).
<b>Cultural Sensitivity</b>	It primarily deals with a homogeneous cultural environment where consumer behaviors and preferences are relatively uniform.	It requires a deep understanding of cultural differences and the ability to adapt marketing strategies to respect and leverage these differences. This includes language translation, cultural norms, and values (Hofstede et al., 2010).
<b>Regulatory Environment</b>	It operates within a single legal and regulatory framework.	International marketing efforts must navigate and comply with multiple legal and regulatory systems, which can vary significantly from one country to another. This includes understanding trade policies, import/export regulations, and local business laws (Kotabe & Helsen, 2020).
<b>Economic Considerations</b>	Marketing generally focuses on a single economic environment.	It deals with multiple economic environments, each with different levels of economic development, currency fluctuations, and economic stability. Pricing, distribution, and promotion strategies must be adapted accordingly (Keegan & Green, 2020).
<b>Market Entry Strategies</b>	It does not typically involve strategies for entering new countries.	International marketing requires decisions on how to enter new markets, whether through exporting, joint ventures, franchising, or wholly owned subsidiaries. Each entry strategy involves different levels of investment, risk, and control (Czinkota & Ronkainen, 2013).

to help navigate the complex terrain. Mistakes are easy to make and are often costly. Most introductory marketing textbooks describe classic cases of blunders in the international arena (e.g., “Nothing sucks like Electrolux”). One of the authors was herself a young mother witnessing the introduction in her country of high-end baby food marketed by Danone under the brand name Bledina, which sounded comically rude and could be politely rendered in English as “A Giant Harlot.”

So, how can artificial intelligence help the processes we described?

## THE IMPACT OF AI ON INTERNATIONAL MARKETING

### Understanding AI

AI tools receive prompts and rely on advanced algorithms, vast data sets, and computing power to identify patterns, make predictions, and improve their performance over time (see, for example, Mitchell, 2020). In simpler terms, AI involves programs trained on large amounts of data to make statistically informed decisions and predictions. For example, if a person typed “Thank you very,” it is statistically highly likely that they would then type “much.” The evolution of AI has been marked by significant advancements in machine learning, natural language processing, and computer vision, which have collectively enabled more targeted, efficient, and effective marketing interventions (Davenport et al., 2020; Huang & Rust, 2021). What is of note here is that by 2021, there was already broad use of nascent AI systems for researchers to analyze. Public awareness of such systems largely boomed in late 2022 when ChatGPT exploded onto the scene.

Kaplan and Haenlein (2019) categorize AI technologies broadly into three types: Narrow AI, general AI, and superintelligent AI. Narrow AI, also known as weak AI, is designed to perform specific tasks such as language translation or image recognition. General AI—or strong AI—refers to systems that possess human-like cognitive abilities and can perform any intellectual task that a human can. Superintelligent AI, a theoretical concept, would surpass human intelligence in all aspects. Currently, most AI applications in marketing fall under the category of narrow AI (Kaplan & Haenlein, 2019).

Machine learning, a subset of AI, involves the development of algorithms that enable systems to learn from data and improve their performance over time without being explicitly programmed. This capability is particularly valuable in marketing, where large volumes of data are generated daily. Machine learning algorithms can identify patterns and trends that inform marketing strategies when analyzing this data. For instance, predictive analytics, a common application of machine learning, allows marketers to forecast consumer behavior and tailor their campaigns accordingly (Davenport et al., 2020; Huang & Rust, 2021).

Natural language processing (NLP) is another critical component of AI that enables machines to understand and interpret human language. NLP is used in various marketing applications, such as chatbots and virtual assistants, which provide real-time customer support and personalized recommendations. Computer vision, which allows machines to interpret and understand visual information, is also increasingly used in marketing for tasks such as image recognition and visual search (Russell & Norvig, 2020).

Generative AI is a catch-all name for a system of tools that respond to prompts to generate something—such as text or an image, depending on the modality being used (Lee et al., 2024). ChatGPT is one of the more popular examples of generative AI. In ChatGPT, you provide a text prompt that generates the requested content. For example, if we asked: “Develop a marketing plan for a line of American jeans in Ireland,” it would generate a detailed overview of instructions and considerations for this prospective business.

## AI-Enhanced Marketing Strategies

AI enhances marketing strategies through personalized content, predictive analytics, and customer segmentation (Chintalapati & Pandey, 2022). Personalized content driven by AI algorithms ensures that marketing messages are relevant and engaging to individual consumers. Predictive analytics enable marketers to anticipate consumer behavior and preferences, allowing for proactive and timely marketing interventions. AI-powered customer segmentation ensures marketing efforts are directed toward the most relevant and profitable segments. These AI-enhanced strategies improve customer experiences and higher conversion rates (Deveau et al., 2023; Huang & Rust, 2021).

Personalized content is a powerful tool in marketing, as it ensures that messages are tailored to the interests and preferences of individual consumers. AI algorithms can analyze vast data, including browsing history, purchase behavior, and social media activity, to deliver personalized content in real time. For example, Amazon uses AI to recommend products to its customers based on their past purchases and browsing behavior. This level of personalization increases the likelihood of conversion and enhances the overall customer experience (Digital Marketing Institute, 2023; Endorsed AI, 2023).

Predictive analytics is another valuable application of AI in international marketing. Predictive analytics can forecast future trends and consumer behavior by analyzing historical data. This capability allows marketers to anticipate customer needs and preferences and deliver timely and relevant marketing messages. For instance, predictive analytics can help retailers forecast demand for certain products, allowing them to optimize their inventory and reduce the risk of stockouts (Deveau et al., 2023).

Customer segmentation is a critical component of international marketing strategy, as it allows marketers to target their efforts toward the most relevant and profitable segments. AI-powered customer segmentation tools can analyze vast amounts of data to identify distinct customer segments based on various criteria, such as demographics, behavior, and preferences. This information can tailor marketing messages and strategies to each segment, resulting in more effective and efficient marketing efforts (Davenport et al., 2020; Huang & Rust, 2021).

## AI in International Branding Strategies

AI-driven analytics and consumer insights are crucial in shaping brand positioning and equity in diverse markets, which is particularly important in international marketing. When analyzing vast consumer data, AI can identify patterns and trends that inform branding strategies. For instance, AI tools can assess consumer sentiment and engagement across different regions, enabling brands to tailor their messaging to resonate with local audiences. Case studies of companies like Coca-Cola whose AI-powered creative platform allows consumers to create Coca-Cola-related digital artwork (Coca-Cola, 2024) and Unilever, which uses AI to create personalized, data-driven marketing strategies that resonate more with individual consumers, especially in regions with diverse needs, demonstrate the successful integration of AI in their international branding efforts, highlighting how AI-driven insights can enhance brand equity (Digital Marketing Institute, 2023; Endorsed AI, 2023).

Brand positioning involves creating a distinct image and identity for a brand in the minds of consumers. In international markets, this process is complicated by cultural differences and varying consumer preferences. AI can help brands navigate these complexities by providing deep insights into consumer behavior and preferences in different regions. For example, sentiment analysis tools can analyze social media posts and online reviews to gauge consumer sentiment toward a brand in a specific market. This information can tailor marketing messages and strategies to align with local preferences (Davenport et al., 2020; Kaplan & Haenlein, 2019).

AI can enhance brand equity by enabling more personalized and engaging consumer experiences. Personalization is a key driver of brand loyalty, and AI-powered tools can deliver highly customized content and recommendations based on individual consumer preferences. For instance, Netflix uses AI algorithms to recommend content to its users based on their viewing history and preferences. This level of personalization enhances the consumer experience while strengthening brand loyalty and equity (Digital Marketing Institute, 2023).

## CASE STUDY 6.1

### **Personalized Marketing for a Health and Wellness Business (IBM Watson, 2020)**

PureWellness is a small company selling organic health supplements. They wanted to enhance their email marketing strategy to increase customer retention and sales in the international market.

The company utilized IBM Watson to create personalized email campaigns based on customer behavior and preferences. AI analyzed customer data to segment the audience based on purchase history, preferences, and behavior; generated personalized email content for each segment, including product recommendations, special offers, and health tips; and implemented automated email triggers based on customer actions, such as cart abandonment or repeat purchases.

As a result, personalized email campaigns achieved a 50% higher open rate and a 35% higher click-through rate; customer retention rates increased by 20% as personalized content fostered stronger relationships; and revenue from email marketing increased by 30%, driven by targeted and relevant content.

### **DISCUSSION QUESTIONS**

- 1 PureWellness used AI to personalize content and achieved a 20% increase in customer retention. How can personalized email marketing develop stronger relationships with customers in a global market?

- 2 Considering that AI analyzes customer data to personalize email marketing, what ethical considerations should be considered in terms of data privacy and customer trust?
- 3 How might PureWellness continue to utilize AI to increase revenue from its email marketing efforts?

## OPTIMIZING INTERNATIONAL MARKETING WITH AI

### Cultural Insights

AI can significantly assist in gathering and analyzing cultural insights crucial for successful international marketing. Here are several ways AI contributes to understanding and leveraging cultural nuances in global markets:

#### Natural Language Processing (NLP)

AI-powered natural language processing (NLP) tools can analyze vast amounts of text data from social media, customer reviews, forums, and other online platforms to understand local languages, dialects, and colloquialisms. This helps businesses tailor their communication to be more culturally relevant and engaging. Applications include:

- **Sentiment Analysis:** AI can analyze sentiments expressed in different languages and dialects to gauge public opinion and consumer attitudes toward brands and products (Pang & Lee, 2008). For example, Marriott International applies it to customer reviews across its 7,000+ properties and chatbot conversations (Ciufo, 2024).
- **Content Localization:** NLP tools can translate and adapt marketing content to fit the local context, ensuring messages are culturally appropriate and resonate with the target audience (Hofstede et al., 2010). For example, Netflix, which currently streams to 190 countries in 30 different languages, puts significant effort into making sure that everything in the user experience—from recommendations to subtitles to the content is tailored to the user's culture and language (see, for example, Falusi, 2020).

#### Social Media Monitoring

AI can monitor social media platforms to track trending topics, popular opinions, and cultural conversations. This real-time analysis helps marketers stay updated on cultural shifts and consumer interests. Applications include:

- **Trend Analysis:** AI can identify emerging trends and cultural movements, allowing businesses to capitalize on current events and societal changes (Fan & Gordon, 2014).



Tools such as, for example, Google Trends, Brandwatch, and Qmarkets, allow tracking trends with varying degrees of supplemental information and analytics (Howarth, 2024).

- **Influencer Analysis:** AI can identify key influencers in different cultural contexts who can effectively promote products and brands to local audiences (Boerman et al., 2017). Tools such as Upfluence, Traackr, and Klear help identify influencers who fit the desired brand image and objectives and provide information on the performance and characteristics of their audience (Atkins, 2024).

## Image and Video Recognition

AI's ability to analyze visual content is useful for understanding cultural preferences and visual aesthetics. This technology can examine images and videos shared on social media to identify popular themes, styles, and symbols in different cultures. Applications include:

- **Visual Trend Analysis:** AI can analyze the types of images and videos that resonate with local audiences, helping brands create visually appealing content (Datta et al., 2008). Tools like TubeBuddy, Vidooly, ViralStat, and VidIQ can analyze the contents of videos and provide varying analytics (VidSaga, 2024).
- **Brand Perception:** By analyzing user-generated content, AI can gauge how brands are perceived visually in different cultural contexts (X. Liu et al., 2017). Tools like BuzzSumo, Hootsuite Insights, Brandwatch, Talkwalker, and Sprout Social allow users to explore and monitor brand perceptions (Hanson, 2024).

## Cultural Data Aggregation

AI can aggregate and analyze data from various sources, including consumer surveys, purchasing data, and online behavior, to build comprehensive cultural profiles. These profiles help businesses understand the values, beliefs, and behaviors that drive consumer decisions in different regions. Many of the already mentioned systems of NLP and analytics are great for such tasks. Applications include:

- **Consumer Behavior Analysis:** AI can identify patterns in how consumers from different cultures interact with products and brands, informing tailored marketing strategies (Kumar & Reinartz, 2018).
- **Cultural Segmentation:** AI can segment consumers based on cultural traits, allowing for more targeted and effective marketing efforts (Terpstra et al., 2012).

## Enhanced Personalization

By leveraging cultural insights, AI can enhance personalization efforts, ensuring that marketing messages, product recommendations, and customer interactions are culturally relevant and resonate with local audiences. Netflix, mentioned earlier, is well known for its precisely targeted, localized, personalized marketing, delivering great

customer experience to users in about 190 countries, in 30 languages (Netflix, n.d.). Applications include:

- **Personalized Marketing:** AI can deliver personalized marketing messages that consider cultural preferences and improve engagement and conversion rates (Kim et al., 2013).
- **Customer Experience:** AI-driven customer service tools can adapt their responses based on cultural context, providing a more personalized and satisfactory customer experience (Gretzel, 2011).

## CASE STUDY 6.2

### **Automated Content Generation for a Travel Agency (Copy.ai, 2022)**

ExploreMore is a boutique travel agency offering custom travel packages. They needed to produce a high volume of engaging travel content for different international destinations to attract a global audience. Manual content creation was not scalable for the small team.

The agency adopted Copy.ai, a generative AI tool, to automate content creation. They generated detailed travel guides for popular destinations, covering local attractions, cultural tips, and travel itineraries; produced a steady stream of blog posts highlighting travel experiences, tips, and customer testimonials; and created targeted email campaigns and social media posts to promote travel packages during peak seasons.

Incorporating AI increased content output by 300%, enabling the agency to maintain a dynamic online presence; blog posts and travel guides generated by AI saw a 40% increase in reader engagement and social shares. These enhanced marketing efforts contributed to a 25% growth in bookings from international clients.

### **DISCUSSION QUESTIONS**

- 1 Why is manual content creation not scalable for small businesses like ExploreMore?
- 2 How can AI tailor travel content to specific audience needs and preferences?
- 3 Beyond content creation, how else might travel agencies use AI to enhance marketing strategies?

## **Opportunities for Small and Medium-sized Enterprises (SMEs)**

One of the most significant advantages of AI is its potential to level the playing field for small and medium-sized enterprises (SMEs) and entrepreneurs. AI, along with other

technological innovations, led to radical transformations in SME systems and processes (Stallkamp et al., 2022), as well as in their methods and workforce, and it improved a variety of outcomes, for instance, by reducing operating costs and improving interactions, among ecosystem stakeholders (Herve et al., 2021). AI tools can provide SMEs with capabilities that were once only accessible to large corporations (Bhandari et al., 2023). For example, AI-powered marketing automation platforms enable SMEs to execute sophisticated marketing campaigns with minimal resources. The ability of AI to generate content in multiple languages, as demonstrated by ChatGPT, further lowers barriers to entry in international markets. However, SMEs must remain vigilant about the accuracy and appropriateness of AI-generated content to avoid potential pitfalls (Deveau et al., 2023).

SMEs often face significant challenges when competing with larger corporations, particularly in international markets. Limited resources and lack of expertise can make it difficult for SMEs to effectively market their products and services. However, AI tools can help overcome these challenges by providing affordable and accessible solutions for various marketing tasks.

For example, AI-powered marketing automation platforms can streamline and automate many marketing tasks, such as email marketing, social media management, and customer relationship management. These platforms can help SMEs save time and resources while executing effective marketing campaigns. Additionally, AI tools can provide valuable insights into consumer behavior and preferences, allowing SMEs to tailor their marketing strategies to meet the needs of their target audience better (Digital Marketing Institute, 2023; Endorsed AI, 2023).

### **Application 6.1** Creating Marketing Emails and Social Media Posts for International Marketing

Learn the basics of how emails/posts can be created and the main decisions that go into creating them. You are trying to build up a small side business by offering a service or product of your choice. Your goal is to boost sales.

- 1 Define your target market (for example, college students, people in a hurry, young professionals, etc.). TIP: Do not limit yourself to thinking about demographics; it is more often about people's lifestyles, benefits they are looking for, occasions, etc., rather than age, gender, and race.
- 2 Think about how you want to position yourself (your brand image).
- 3 Using a generative AI platform, prompt it to create an email or a social media post promoting your product or service to the target audience.
  - a Be sure to tell it what you want it to do (write a promotional email or social media post).
  - b Tell it who you are targeting (your target market).
  - c Consider the tone you want (warm, funny, serious, sarcastic, etc.).
  - d Include a call to action.

- 4 Review the content, adjusting the prompts as needed.
- 5 Edit the final result.
- 6 Now, change the target market to a different group of people in another country/region and regenerate the output using otherwise similar prompts. Compare the results.
- 7 Use AI tools (Such as Google translate, ChatGPT, etc.) to translate your email or social media post into the language of your target market. If their language is English, choose some other language (especially the one you know). See if you can find somebody who can read that language and show them your translation.
- 8 Now, using the same tools, translate the text back into English. Compare to your original text.

### Discussion Questions

- 1 Do you like your creation? Will this email/post achieve the desired results? Will the recipients like it and want to act on it? Why or why not?
- 2 Did you need to edit the AI output or was the text generated by the AI good as is, perhaps with only minor tweaks?
- 3 Was your text in any way problematic after you translated it into the other language and back?
- 4 How could this be useful to a small business?
- 5 What possible problems and issues could arise when using AI?

AI can also help SMEs expand into international markets by breaking down language barriers. Tools like ChatGPT can generate content in multiple languages, enabling SMEs to communicate with consumers in different regions. This capability can significantly lower the barriers to entry in international markets, making it easier for SMEs to expand their reach (Digital Marketing Institute, 2023).

To illustrate, the authors asked ChatGPT to write a letter proposing business collaboration in one of the authors' native languages (since the authors can judge the resulting quality). In minutes, ChatGPT generated a passable letter without linguistic mistakes and added suggestions that made sense about what pieces of information to add. Such tools, at least superficially, significantly lower the barriers to entry in the international arena.

However, SMEs must remain vigilant about the accuracy and appropriateness of AI-generated content. While AI tools can generate content quickly and efficiently, they are not infallible and may produce errors or culturally insensitive content. Therefore, SMEs need to review and refine AI-generated content to ensure it is accurate and appropriate for their target audience (Huang & Rust, 2021).

This is especially relevant where legal issues are concerned. The authors generated advice on simple things like opening a business in the city of Novosibirsk, Russia, using

several different engines, including ChatGPT 4o, Claude, and more, and the engines gave similar advice but differed in detail. Some offered actual addresses of the authorities one needs to visit; some didn't, and not a single engine provided advice that could be implemented. As with all our other experimentation here, we are aware of the rapid advances in these tools and are only using them to demonstrate what is working right now; by the time the reader reads this book, surely, the tools will advance.

## **BARRIERS TO AI INTEGRATION IN GLOBAL MARKETING**

Despite its transformative potential, AI integration in international marketing presents several challenges. These include language barriers, data compatibility issues, political and legal complexities, ethical considerations, cultural sensitivity, and adaptation issues. Each of these issues can grow into an insurmountable hurdle.

One of the questions is about creativity. Some early results show that Generative AIs quickly start repeating their recommendations and no longer serve their purpose in content generation (Shapiro Beigh et al., 2024). If this practice continues, such systems in non-routine communications could be undermined.

### **Language Barriers and Translation Issues**

Language barriers are a significant challenge in international AI marketing. Automated translation tools like Google Translate have improved, but they still struggle with idiomatic expressions, colloquialisms, and cultural nuances. This can result in inaccurate or inappropriate translations that harm a brand's reputation and credibility (Davenport et al., 2020; Russell & Norvig, 2020). For instance, Pepsi's slogan "Come alive with the Pepsi Generation" was allegedly mistranslated in Chinese as "Pepsi brings your ancestors back from the dead," highlighting the potential for costly miscommunications in international marketing (Allen, 2017).

AI translation tools also need help with context, tone, and sentiment, which are critical for effective international marketing communication. Misinterpretations can lead to marketing messages that are off-brand or culturally insensitive, damaging customer trust and loyalty (Kaplan & Haenlein, 2019). Automatic translation failures have been the fodder of infinite jest online (Williams, 2016), and despite progress, these tools are still far from perfect. Brands lose credibility when grammatical issues arise. This issue becomes incredibly challenging when dealing with languages with grammatical structures that do not correlate well with English—for example, having genders, declensions, and cases.

### **Data Compatibility and Accuracy Concerns**

Data compatibility and accuracy are critical issues in international AI marketing. Data from different regions can vary significantly in format, quality, and availability. This variation makes aggregating and analyzing data effectively across various markets challenging. Inconsistent data can lead to inaccurate insights and poor decision-making (Huang & Rust, 2021).

Moreover, integrating diverse data sets from various sources requires robust data management and preprocessing capabilities. Businesses must invest in advanced data infrastructure and ensure data quality to effectively leverage AI. Failure to do so can result in erroneous conclusions and ineffective marketing strategies (Davenport et al., 2020).

One particularly notorious and humorous example of hopelessly inaccurate data resulting in dangerous advice is the recent snafu with Google's recommendation to add Elmer's glue to pizza topping (Kelly, 2024). Around the same time, Google recommended eating rocks (McMahon & Kleinman, 2024).

## **Political and Legal Complexities**

Navigating different countries' diverse political systems and legal frameworks adds another layer of complexity to international marketing. Data privacy regulations, such as the General Data Protection Regulation (GDPR) in the European Union (EU), vary significantly across countries. These regulations impose strict data collection, processing, and storage requirements, complicating AI-driven marketing efforts (Kaplan & Haenlein, 2019).

Compliance with local laws is essential to avoid legal penalties and protect brand reputation. However, the dynamic nature of regulatory environments requires businesses to stay updated and adapt their practices continually. This necessitates significant resources and expertise, which can be challenging for many organizations (Russell & Norvig, 2020).

## **Ethical Considerations**

Ethical issues are paramount in the use of AI for international marketing. Data privacy is a significant concern, as consumers are increasingly aware of and concerned about how their data is collected, used, and shared. Marketers must be transparent about their data practices and ensure compliance with local data privacy regulations to maintain consumer trust (Huang & Rust, 2021).

The digital divide, or the gap between those with access to digital technologies and those without it, can exacerbate existing inequalities. AI-driven marketing strategies may unintentionally exclude or disadvantage certain consumer groups, leading to ethical dilemmas. Businesses must consider these implications and strive to use AI responsibly and inclusively (Kaplan & Haenlein, 2019).

The issue of copyright and ownership of content also remains. Legal battles will likely emerge. It is beyond the scope of this chapter to address many of the possible profound problems that might arise in society because of AI technologies.

## **Cultural Sensitivity and Adaptation**

Cultural sensitivity is another challenge in international marketing as it relates to AI. Marketing strategies that work well in one cultural context may not be effective or appropriate in another. AI tools must be trained to recognize and adapt to cultural differences in consumer behavior, preferences, and communication styles. Failure to do so can result in marketing campaigns that are irrelevant or offensive to the target audience (Davenport et al., 2020).

Effective international marketing requires a deep understanding of local cultures and consumer insights. AI tools can assist in gathering and analyzing cultural data, but human oversight is crucial to ensure that marketing messages are culturally appropriate and resonate with local audiences (Russell & Norvig, 2020).

## Hallucinations

Sometimes, AI-generated texts are just plain wrong. References and facts can be inaccurate. Random bits of text are often mixed in with all the helpful advice. The aforementioned advice to eat rocks and add glue to pizza is evidence of this issue. We can't underscore this enough: always verify the facts and sources generated by AI.

## APPLICATIONS FOR GLOBAL MARKETING PROFESSIONALS

### Practical Advice for Creating Prompts Using Generative AI Tools in International Marketing: A Scholarly Perspective

Keep in mind that the field evolves quickly! Tools and issues will change, yet the need for a detailed set of specific, well-structured instructions will remain. The most significant difference in the quality of your output will depend on how well you structure your request and the quality of your prompts. This section explores practical advice for creating AI prompts in international marketing, backed by scholarly sources and real-world examples.

#### Specificity and Clarity in Prompts

The quality of the AI-generated output depends on the specificity and clarity of the prompts (Brown et al., 2020). Clear and specific prompts yield more relevant and accurate results.

#### Practical Example

- Prompt: "Write a 150-word email introducing our new eco-friendly cleaning product line to environmentally conscious European consumers. Highlight the product's natural ingredients and sustainability certifications."
- Outcome: The AI tool produced an email communicating the product's key selling points, resonating well with the target audience.

**Advice:** Craft prompts that are detailed and specific. Include all necessary information that defines the task, such as the type of content, target audience, key points to cover, and desired tone.

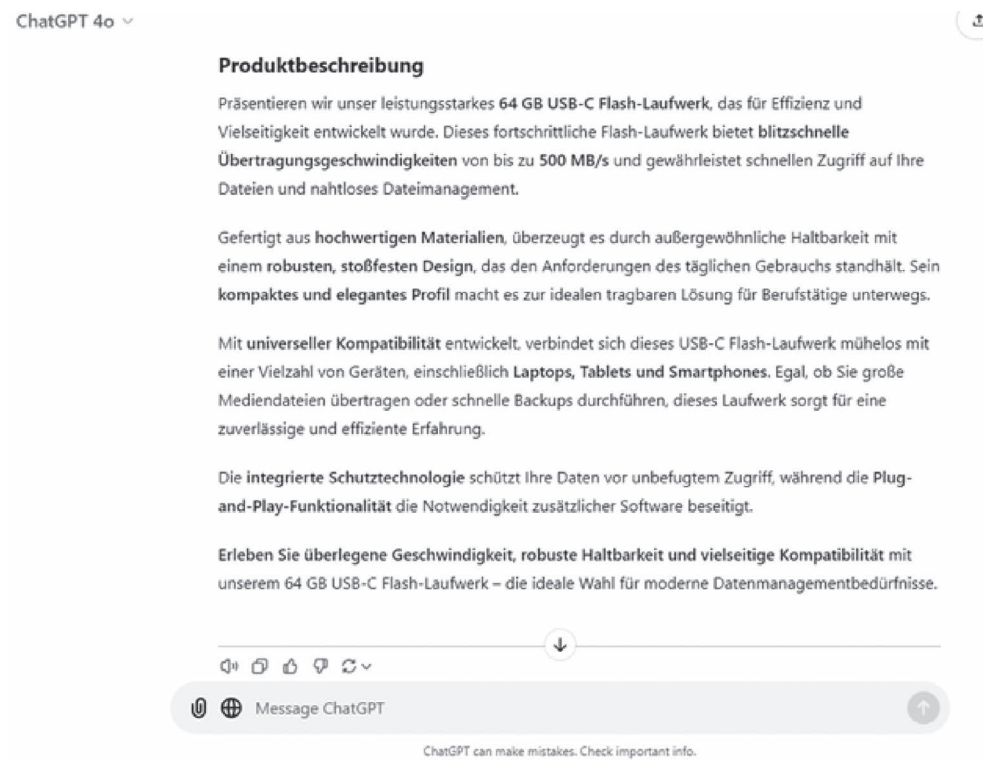
## Providing Context and Background

Providing context helps AI models generate content that is coherent and contextually appropriate (P. Liu et al., 2021). Contextual information can include background details, objectives, and any relevant constraints.

### Practical Example

- Prompt: “Generate a 200-word product description for a 64GB USB-C flash drive, focusing on its speed, durability, and compatibility with various devices. Use a professional tone. Provide Spanish and German translations.”
- Outcome: The AI generated a professional and detailed product description that effectively highlighted the flash drive’s features. See Figure 6.1 for output.

**Advice:** Incorporate relevant context into your prompts. This could be background information about the product or service, the purpose of the content, and any specific elements that should be included.



**FIGURE 6.1** ChatGPT Output: Example of 200-word Product Description for a 64GB USB-C Flash Drive, Focusing on Its Speed, Durability, and Compatibility with Various Devices in German



## Iterative Refinement and Feedback Loops

**Scholarly Insight:** Refining prompts based on feedback improves the quality of AI outputs (Clark et al., 2019). An iterative approach allows for continuous prompt improvement to better meet user needs.

### Practical Example

- Initial Prompt: “Write a blog post on the benefits of remote work.”
- Refined Prompt: “Write a 500-word blog post on the benefits of remote work for small businesses, including statistics and real-life examples.”
- Outcome: The refined prompt yielded a more comprehensive and targeted blog post better suited to the audience’s interests.

**Advice:** Start with a general prompt and refine it based on the output. Use feedback loops to iteratively improve the prompt, ensuring the content generated becomes increasingly aligned with your requirements.

## Specifying Tone and Style

**Scholarly Insight:** Tone and style are extremely important in generating content that aligns with brand identity (Bender et al., 2021). Specifying these elements in the prompt ensures consistency and appropriateness.

### Practical Example

- Prompt: “Create a lively Instagram post about our summer collection launch, using an enthusiastic and youthful tone.”
- Outcome: The AI-generated post was vibrant and engaging, perfectly matching the brand’s youthful and energetic image.

**Advice:** Clearly state the desired tone and style in your prompts. Whether professional, casual, formal, or playful, specifying these elements helps the AI produce content that fits your brand’s voice.

## Use of Examples

**Scholarly Insight:** Providing examples is a well-documented method to guide AI models. According to Radford et al. (2019), examples serve as templates that the AI can mimic, leading to higher-quality outputs.

### Practical Example

- Prompt: “Write a product review similar to the following: ‘This laptop is incredibly fast and lightweight. Perfect for professionals on the go. Highly recommend!’”

- Outcome: The AI-generated product reviews that closely followed the given template, maintaining a consistent tone and structure.

**Advice:** Include examples of the desired output within your prompts. This helps the AI tool understand your expectations and produce content that closely matches the provided examples.

Creating effective prompts for generative AI involves a combination of specificity, contextual information, iterative refinement, tone and style specification, and examples. By incorporating these elements, users can significantly enhance the relevance and quality of AI-generated content. This practical advice is grounded in scholarly research and supported by real-world applications, underscoring the transformative potential of generative AI in various domains.

## **Practical Advice for Choosing Generative AI Tools: A Scholarly Perspective**

Selecting the appropriate generative AI tool is crucial, particularly in international marketing. This choice should be informed by several considerations, including the tool's capabilities, ease of integration, cost, and ethical implications. This section provides practical advice for choosing generative AI tools backed by scholarly sources and real-world examples.

### **Evaluate Capabilities and Features**

Understanding the capabilities and limitations of AI tools is essential for their effective deployment (Brundage et al., 2018). Different tools offer various functionalities, such as natural language processing, image generation, etc. It is best to identify the specific needs of your project and evaluate which AI tools' features align with these requirements. For instance, if text generation is a priority, tools like ChatGPT 4o (OpenAI) are suitable as they are known for their versatility in generating coherent text across different contexts (Brown et al., 2020).

### **Integration and Compatibility**

The ease of integration with existing systems is a critical factor. Zhao et al. (2021) highlighted how the seamless integration of AI tools can significantly enhance workflow efficiency. Practitioners should consider the compatibility of the AI tool with their current technological infrastructure. Tools that offer extensive Application Programming Interface (API) support and are compatible with your existing systems will facilitate smoother implementation and operation. For example, IBM Watson offers comprehensive APIs and Software Development Kits (SDK) for easy integration into various platforms (Ferrucci et al., 2010), and Microsoft Azure Cognitive Services provides robust integration with Microsoft's ecosystem, including Azure cloud services (Mitchell, 2020).

### **Cost and Scalability**

The cost and scalability of AI tools are pivotal factors (Zhang et al., 2018). Marketing managers should analyze the cost structure of the AI tools, considering both initial expenses

and long-term scalability. Choose a tool that fits the budget while offering the ability to scale. For example, Open AI's GPT offers tiered pricing based on usage, which can become expensive at higher scales (Brown et al., 2020). Google Cloud AI provides flexible pricing options that can be more cost-effective for large-scale operations (Jaitly & Mansour, n.d.).

## Ethical and Legal Considerations

Ethical and legal considerations are paramount. Floridi et al. (2018) emphasize the need for transparency, fairness, and accountability in AI systems. Ethical considerations include those of bias (when AI systems lead to unfair outcomes due to the built-in biases in the training data and algorithms), privacy concerns (as these systems collect and analyze large amounts of data), security (large amounts of stored sensitive data can be compromised), and intellectual property (as AIs have the potential to violate patents, trademarks, etc.). As it relates to legal considerations, the issues of ownership of the generated texts and images are quite muddled (Lee et al., 2024; Han et al., 2021; Russell & Norvig, 2020; Zhao et al., 2021).

To address legal and ethical challenges, you should ensure the AI tool complies with ethical standards and legal regulations. It is important to choose providers that prioritize transparency and have robust measures to prevent misuse and ensure data privacy. For example, marketers working with the residents of the EU and the United Kingdom (UK) need to comply with the requirements of the GDPR. It presents several challenges for the use of AI, particularly regarding the collection, storage, and processing of personal data (Quezada-Tavarez et al., 2022). The GDPR includes requirements for consent, minimizing the data obtained from the users and providing tightened security. Users from these countries have the right to have their data completely deleted and not to be subjected to decisions based solely on automated processing, including profiling unless certain conditions are met.

## User Community and Support

The availability of a strong user community and support infrastructure can be invaluable. Von Krogh et al. (2012) noted that active communities and support systems facilitate knowledge-sharing and problem-solving. Active user groups sharing information, advice, and insight, as well as the availability of documentation, all help learn to use each tool efficiently and effectively. Opt for AI tools backed by strong user communities and robust support systems. Active communities can provide valuable insights, troubleshooting tips, and enhancements, while good support ensures that technical issues are resolved promptly.

Tools to compare AI performance constantly evolve. As developers game these systems, they continuously adapt. Some systems will develop more than others, and new strong contenders may emerge. For example, TensorFlow benefits from a large and active community, extensive documentation, and Google's support (Abadi et al., 2016), and PyTorch is known for its ease of use and strong community support, especially in the research community (Paszke et al., 2019).

## CASE STUDY 6.3

### Localized Content Creation for an E-commerce Business (Manassakis, 2024)

Qogita, a health and beauty B2B marketplace, opened in the Netherlands as an outlet for small and medium businesses to compete in the difficult health and beauty market. It connects channel partners and customers. They featured a combined product catalog for all the products their members were offering and helped find optimal channel partnerships. With the initial success came the desire to expand internationally, in particular across Europe including Central and Eastern Europe. The company needed to create a localized and multilingual website, content for product descriptions, marketing materials, and customer communications to effectively engage with these new markets.

“As a new entry in a market, it’s important for us to build trust and convince retailers of the value of our platform,” said Qogita’s CEO Manolis Manassakis, “The B2B space, compared to B2C, is more reliant on localisation. Additionally, B2B transactions often involve established relationships between buyers and sellers” (Manassakis, 2024, para. 6).

Quogita started employing AI tools to create content in European languages, including videos and other materials. Not only did the materials use different languages, they further adjusted the content based on the response in each country.

Additionally, they discovered that their massive product catalog made it difficult to select keywords; moreover, translating regular keywords did not always match user search queries due to the differences in the languages and local market practices. AI tools helped them navigate this issue with ease, automatically selecting the best keywords for searches in each location.

The use of AI tools increased revenue and new customer acquisition by more than five times in just a year, and the revenues continued to grow rapidly the following year.

### DISCUSSION QUESTIONS

- 1 When expanding to international marketing, why is localized content important for companies like Quogita?
- 2 What are the potential advantages and disadvantages of using AI for multilingual content creation in global marketing?
- 3 Identify potential risks of relying on AI for customer service when dealing with different cultural settings and languages.

## CHAPTER SUMMARY

Generative AI tools can provide a veritable treasure trove of useful items, a real marketer's feast! International marketing managers can quickly and efficiently produce visual and multimedia marketing content such as blog posts, graphics, videos, and animation tailored to different markets, enhancing the marketing materials' visual appeal and effectiveness. In other words, generative AI can deliver marketing content for international markets that considers cultural nuances and local preferences and adapts content to fit the cultural context of each market. This helps companies create more relevant and engaging campaigns. It also allows marketers to focus on strategy and creativity. AI can also assist in brainstorming and generating creative ideas for marketing campaigns, helping marketers overcome creative blocks, developing innovative solutions, and providing insight into data. Overall, generative AI empowers international marketers to operate more efficiently, creatively, and effectively, helping them navigate the complexities of global markets and connect with consumers more meaningfully.

The challenge of using AI in international marketing is that the output quality will vary depending on your ability to be analytical and coherent. Success will largely depend on the quality of your prompts. Above all, never take the AI outputs for granted. They can be wrong. This is a lesson that both practitioners and students are well advised to learn.

### KEY TERMS

- **Artificial Intelligence:** The technology that enables computers and machines to simulate human intelligence and problem-solving capabilities.
- **Generative Artificial Intelligence:** Advanced algorithms that can create new content, including audio, code, images, text, simulations, and videos.
- **Machine Learning:** A method of data analysis that allows a system to learn over time by analyzing patterns from prior experience.
- **Natural Language Processing (NLP):** Allows machines to process and interpret human language, simplifying text data analysis and the extraction of customer sentiment and important themes.

## DISCUSSION QUESTIONS

- 1 What key tasks are identified in international marketing? What differences stand out from domestic marketing?
- 2 How can international marketing efforts and strategies be enhanced by AI?
- 3 How is AI used in international marketing?
- 4 How can AI be leveraged in small and medium-sized enterprises (SMEs) for their international marketing efforts? What opportunities and challenges might they face?

- 5 When writing prompts for AI tools in marketing, what are some best practices? How can marketers ensure that their prompts generate useful and relevant content?
- 6 What potential problems and challenges may arise when using AI for international marketing, particularly regarding data, cross-cultural, ethical, and legal concerns?

**TABLE 6.2** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Upfluence</b>	<a href="https://lp.upfluence.com/">https://lp.upfluence.com/</a>	Upfluence is an influencer management platform. Among other things, it finds, contacts, manages, and pays influencers. It is integrated with online retailers like Amazon and Shopify.
<b>Traackr</b>	<a href="http://www.traackr.com/">www.traackr.com/</a>	Traackr is an influencer management platform. Among other things, it finds, recruits, and manages influencers while measuring results and optimizing campaigns.
<b>Klear</b>	<a href="https://klear.com/">https://klear.com/</a>	Klear is an influencer marketing platform that identifies influencers by social media network or business type. It also manages relationships, measures campaigns, examines influencer analytics, and more.
<b>Google Trends</b>	<a href="https://trends.google.com/trends/">https://trends.google.com/trends/</a>	Google Trends analyzes the popularity of trending topics from search queries in Google Search across different regions and languages over time.
<b>Brandwatch</b>	<a href="http://www.brandwatch.com/">www.brandwatch.com/</a>	Brandwatch is a social media management tool that allows you to understand consumers by monitoring brands, competitors, and industry trends.
<b>Qmarkets</b>	<a href="http://www.qmarkets.net">www.qmarkets.net</a>	Qmarkets is innovation management software. It assists with innovation challenges such as developing new products and services, improving processes, and engaging employees.
<b>BuzzSumo</b>	<a href="https://buzzsumo.com/">https://buzzsumo.com/</a>	BuzzSumo is a content marketing tool for creators. It is used to create content, monitor brands and industries, and uncover opportunities for growth.
<b>Hootsuite Insights</b>	<a href="http://www.hootsuite.com/">www.hootsuite.com/</a>	Hootsuite Insights allows you to manage all of your social media platforms in one place. This includes scheduling and publishing posts, content curation, messaging and customer service, analytics, social listening, creating ads, campaign management, and more.

(Continued)

TABLE 6.2 (Continued)

Resource	URL	Description
<b>Talkwalker</b>	<a href="http://www.talkwalker.com/">www.talkwalker.com/</a>	Talkwalker by Hootsuite is a social intelligence platform that focuses on social listening, media monitoring, and social benchmarking.
<b>Sprout Social</b>	<a href="https://sproutsocial.com/">https://sproutsocial.com/</a>	Sprout Social is a social media management platform that allows you to plan, create, and manage content and campaigns. It includes tools for engagement, measuring analytics, social listening, influencer marketing, and employee advocacy.
<b>TubeBuddy</b>	<a href="http://www.tubebuddy.com/">www.tubebuddy.com/</a>	TubeBuddy is a video optimization software. It helps to identify trends to incorporate into videos for more clicks to improve SEO.
<b>ViralStat</b>	<a href="https://viralstat.com/">https://viralstat.com/</a>	ViralStat is a cross-platform social video analytics tool that tracks, analyzes, and compares social channels to discover trends.
<b>VidIQ</b>	<a href="https://vidiq.com">https://vidiq.com</a>	VidIQ is a video optimization tool. It provides insights on trends, competitors, and productivity tools.
<b>You.com</b>	<a href="https://you.com/">https://you.com/</a>	You.com is an amalgamation of various LLMs. We asked how it could be best used in international marketing contexts. It recommended explaining that it leverages advanced AI capabilities to enrich marketing strategies and operations, including market research and insights, content creation and strategy development, email marketing optimization, and integration of AI-powered tools for campaign management (You.com, 2024).

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



FIGURE 6.2 QR Code to Online Support Material

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# AI's Impact on Frontline Sales

*Avishek Lahiri*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Recognize the importance and functioning of frontline roles, particularly in business-to-business sales.
- 2 Describe the impact of disruptions in technologies, customer behavior, and digital business models with emphasis on AI's role.
- 3 Discuss the nuances of the traditional sales processes in business-to-business industries.
- 4 Incorporate AI tools, applications, and insights into sales processes.
- 5 Evaluate AI-related opportunities and challenges in frontline sales with proposed solutions and implications for practitioners.

## INTRODUCTION

### Frontline Roles in Sales and Marketing

Frontline workers directly interact with customers as representatives of profit and non-profit organizations in sales or service roles (Hartline & Ferrell, 1996). As a link between customers and organizations, frontline workers are central to developing customer relationships and promoting the organization's brand. They leverage their knowledge of customers to help their organizations improve revenue growth, service delivery, products, and processes. Frontline workers strive to satisfy their customers and achieve organizational performance targets. This chapter focuses on sales representatives, also known as sales reps, or representatives, or salespersons, or salespeople, who are responsible for selling the organization's goods or service. Beyond selling, sales representatives undertake service tasks such as after-sales service to form win-win relationships with customers.

Sales representatives are prevalent in every industry. Examples in business-to-customer industries are retail sales associates, car sales reps, and financial advisors. In business-to-business industries, sales representatives sell software, industrial equipment, medical devices, advertising, logistics solutions, and cloud storage, among others. Even real estate, insurance, and travel agents have elements of selling in their roles. For clarity, this chapter will focus on **sales representatives in the business-to-business industries (B2B) selling products, which can be physical goods, intangible services, or a combination of both.** This chapter focuses on B2B as the sale involves a higher degree of complexity, transaction value, and involvement. Acquiring organizational customers requires time to create awareness and build relationships with multiple influential individuals involved in the purchase (i.e., buying center). Applications in business-to-consumer industries are presented to contrast and compare.

### Significance of Frontline Roles in Sales

This chapter presents how AI applications, insights, and analysis affect every aspect of the sales process. According to the Bureau of Labor Statistics, 13.38 million people are engaged in sales and related jobs in the US. (BLS, 2024). If you are graduating from a US college, regardless of your major, there is a higher than 50% probability that you will take a sales role (Sales Education Foundation, 2023). However, overall employment in sales-related roles is projected to decline from 2022 to 2032 (BLS, 2024). One reason is AI, which has the potential to make the sales process more efficient by automating many non-revenue tasks so that sales representatives can focus on selling tasks. As the Sales Mastery 2022 survey reveals, on average, sales representatives devoted only 32% of their time to selling (Dickie et al., 2022). Adoption of AI tools by representatives requires an understanding of the technology and the changes it brings in customer behavior and in new business models. Together, there is a fundamental shift in the skills toward higher-order sales tasks (e.g., data-driven selling). Currently, there is a severe shortage of sales representatives who possess these skills or use AI to enhance their productivity (Dickie et al., 2022). This chapter addresses this skill gap for students who wish to succeed in sales in the near future.

## Disruptions in the Frontlines

### Information and Communication Technology

Technology, which affects customer behaviors and business models, is disrupting frontline roles. We focus on AI as it is a general-purpose technology similar to electricity, steam engines, and the internet. Like these technologies, AI's continued development and adoption impacts production and innovation processes across industries. Further, AI is influential in the development of other impactful technologies such as robotics, the Internet of Things (IoT), augmented reality (AR), and virtual reality (VR). The development of AI is possible due to advancements in hardware, software, data storage, and networking over the last 100 years. The miniaturization of transistors in integrated circuits with minimal rise in cost led to more powerful but smaller processors, which are used in personal computers, mobile phones, and wearable devices (Javadi & Herrera, 2024). The development

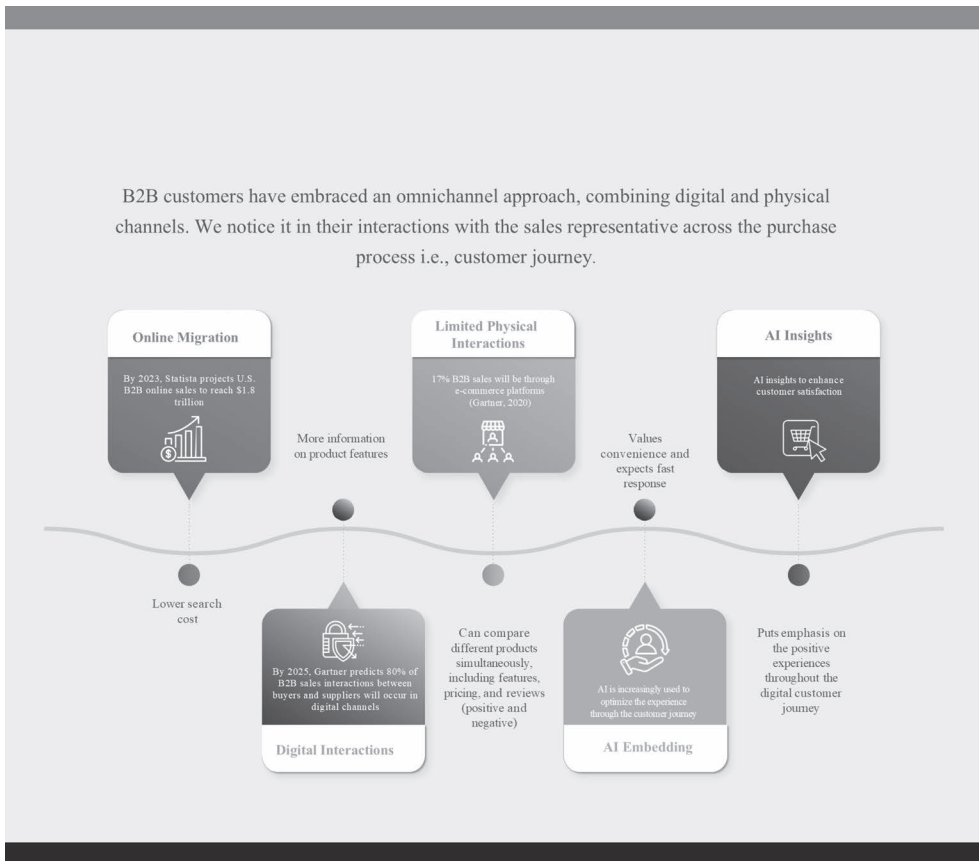
of software, the internet, and social media led to the popularity of these smaller devices. Sensor technologies in personal and industrial devices, integrated with software, capture process-level data. This data is shared within and across organizations using connected databases, cloud storage, and fast networks. All these developments play a role in generating and capturing vast amounts of data, aptly named big data. By one estimate, 328.77 million terabytes of data are created daily (Duarte, 2023). An organization's ability to assimilate new data with existing data in real time and then process the combined data as information quickly and accurately is a competitive advantage (Hagiu & Wright, 2023). AI is helping organizations and sales representatives to analyze big data and interpret the results.

### B2B Customer Journey Becomes Omnichannel

Following the adoption of technologies, B2B customers have embraced an *omnichannel* approach, combining digital and physical channels. We notice it in their interactions with the sales representative across the purchase process, i.e., the *customer journey*. For instance, a glass manufacturer that needs respiratory protection researches online (search engines, websites, chatbots) and consults various sources (forums, colleagues) before considering specific sellers. The manufacturer contacts sellers through online forms or email for more details. In 2023, digital channels accounted for an estimated 14% of B2B sales valued at \$1.8 trillion (Coppola, 2024; Bonde et al., 2019). Even in physical B2B sales, online meetings are commonplace, at least initially in the purchase process. By 2025, Gartner predicts that 80% of B2B sales interactions between buyers and suppliers will occur in digital channels, and 17% of B2B sales will be through e-commerce platforms (Gartner, 2020). AI is increasingly used to capture interactions data and optimize the experience through the digital journey (See Figure 7.1). Sales representatives must be cognizant of these changes in customer behavior and use AI insights to close sales and enhance customer satisfaction.

**TABLE 7.1** Digital B2B Customer Characteristics Compared to Non-digital B2B Customers

<i>Characteristic</i>	<i>Digital B2B Customer</i>	<i>Non-digital B2B Customer</i>
Search costs (i.e., time and effort to find sellers)	Lower search costs	Higher search costs
Information regarding the product and seller prior to presentation	Has more information	Has less information
Comparison of product features, pricing, and reviews	Multiple products simultaneously	One product at a time
Values regarding customer experience	Hyper convenience	Convenience
Expectations	Fast response time	Normal response time



**FIGURE 7.1** B2B Customer Journey Becomes Omnichannel

## New B2B Business Models

A business model describes how a firm creates value for customers and appropriates value from its performance of activities (Fjeldstad & Snow, 2018). The acceptance of digital channels by B2B customers opened different avenues for businesses to create value and appropriate value.

- 1 Platformization:** B2B marketplaces or e-commerce platforms (e.g., BigCommerce, CS-Cart) connect buyers and sellers in a digital environment, streamlining the procurement process, reducing cost, and increasing efficiency. Many companies are launching their web store (e.g., 3M) using plug-ins (e.g., WooCommerce B2B).
- 2 Subscription-as-a-Service:** Organizational customers pay a fee to access a product regularly. B2B customers increasingly favor subscription models as they reduce upfront



costs, offer scalability on demand, increase flexibility, and provide a predictable cost structure.

- 3 **Outcome-based Pricing:** This model focuses on the value delivered to the customer using data. B2B sellers (e.g., management consultancies) charge based on the customer's achievement of specific outcomes, such as increased sales, rather than an upfront fee.

AI is vital in these business models as it matches customers and sellers, predicts likely outcomes, and provides data-driven insights based on statistical techniques. Together, these disruptions are changing the sales process. Armed with this knowledge, sales representatives need to revisit the traditional sales process to assess the impact of AI in each step and develop skills accordingly.

## SALES PROCESS IN B2B

The sales process has been defined by academics and perfected by practitioners (Deeter-Schmelz et al., 2024; Manning et al., 2018). The sales process in B2B industries has seven steps. It differs slightly based on the sector or the organization's business model. Fjeldstad and Snow (2018) delineate business models into four types: 1) value chain transforms inputs into products, e.g., John Deere tractors; 2) value shop resolves customer problems on a case-by-case basis, e.g., IT consulting by Salesforce; 3) value network links nodes—customers, things, and places—and provides services that allow exchanges among nodes e.g., Uber Eats; and 4) value access provides access to the use of physical, informational, and human resources e.g., Amazon Web Services. Figure 7.2 shows the sales process and the role of sales representatives in all business models. Notice that there is sufficient commonality in the sales process as representatives in all business models deal with organizational customers.

### Impact of AI on the Seven-step B2B Sales Process

The seven-step sales process is also called the sales funnel as it captures the sales journey from numerous leads to a select few customers (see Figure 7.3) (Deeter-Schmelz et al., 2024; Manning et al., 2018). Therefore, the B2B sales process and the customer journey are aligned. We assume that the sales team is organized geographically by territory. The first six steps of the sales process relate to customer acquisition. The final step is building the relationship to retain the customer. The traditional sales process referred to in this section builds on established sales materials (Deeter-Schmelz et al., 2024; Manning et al., 2018). After the recap, the author lists the shortcomings of the traditional approach using academic and practitioner sources. The shortcomings are followed by a novel AI-embedded approach, where the AI-powered sales tools alleviate many deficiencies. Each step ends with identifying, comparing, and contrasting the AI-embedded and traditional methods.



The sales process has been defined clearly by academics and perfected by practitioners (Deeter-Schmelz et al., 2024; Manning, Ahearne, & Reece, 2018). They differ slightly based on the four business models (Fjelstad & Haanæs 2018).

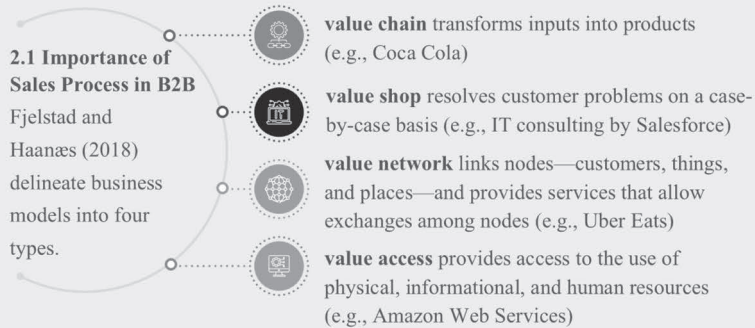


Figure 2 shows the role of B2B sales representatives in all business models.



**FIGURE 7.2** Sales Process in All Business Models



**FIGURE 7.3** Sales Process—Customer Journey Alignment

## Step 1—Lead Generation

### *Traditional Approach*

Lead generation does not involve interactions with the customer. The seller's marketing team and the sales representative identify leads, i.e., organizations in the territory (area) that are aware of the seller and can benefit from its products. Lead generation entails researching leads' firmographic details (e.g., industry type, business process, revenue). Next, potential customers (or prospects) from the leads are identified based on their perceived needs and fit with the seller's product (Paschen et al., 2020). Prospecting is a continuous process either for growth or replacement, as there can be customer attrition or gradual loss of customers over time.

### *Shortcomings*

Researching each prospect takes a lot of time, effort, and money for the sales representative. Non-selling activities such as networking, training, administrative tasks, and market research take up 68% of the representatives' time, leaving less time for selling activities (Dickie et al., 2022). Consequently, sales representatives depend on their "gut feel" for lead generation. The result is a misallocation of the representative's selling time and effort (Salesforce, 2022).

### *AI-embedded Approach*

Enter AI-embedded lead generation software tools such as Bombora, Leadfeeder, and xiQ. These tools utilize web scraping to identify leads, machine learning to gauge prospect intent from website engagement, and predictive lead tracking (Rainsberger, 2022). Let us understand these functionalities with some examples from practice. Bombora uses AI to identify leads from the seller's website visits and the customer's online browsing behavior. Beyond website visits, Bombora tracks content downloads, form submissions, and engagement on websites to identify prospects. It integrates engagement data with firmographic details to detect the prospect's intent probabilities (Bombora, 2024). Leadfeeder uses tracking technology based on IP addresses to classify anonymous website visitors into identifiable organization names. It enriches this data with firmographics and visitor behavior to assign scores to potential leads (Leadfeeder, 2024). xiQ's "Ask Gilroy" chatbot mines data about the prospect's decision-makers. Analyzing LinkedIn feeds, websites, news articles, and social media posts, Gilroy assigns personalities to these individuals (e.g., self-assured), maps their career progression, and recommends communication styles for emails and in-person meetings (Xiqinc, 2024). xiQ, like other sales intelligence software such as ZoomInfo and LinkedIn Sales Navigator, uses AI to provide reports on the organizational changes, competitor analysis, social selling, mergers, and acquisitions (LinkedIn, 2024; Zoominfo, 2024). These insights help sales representatives enrich prospect or customer data efficiently.

### *What Is Different with AI?*

In the traditional approach, representatives spend much time understanding the prospect's needs. If time-pressed, representatives use intuition, which often leads to suboptimal pitches. Using AI, sales representatives proactively approach their prospects with rigorous research and insights, which helps them focus on the prospect's highest probable needs. Further, sales representatives allocate their time and effort efficiently, while sellers allocate their resources judiciously based on potential value or *customer lifetime value* (CLV). As research time reduces, representatives dedicate more time establishing connections. In the traditional approach, there is a higher probability for the overallocation of effort and resources on low-value customers and under allocation on high-value (potential key account) customers (Salesforce, 2022).

**Application 7.1 Calculating Cost per Lead**

In lead generation software, cost per lead is a standard metric. The formula is:  
Cost per Lead = Total Marketing Spend/Number of Leads Generated

Lead generation software provides insights into the marketing channel, ad campaign, and lead quality. AI calculates the cost per lead and related metrics. To truly understand how this metric works, let us do a calculation. The following dataset lists costs related to *personnel* (salaries, training, overtime), *technology* (marketing automation, customer relationship software, website), *marketing* (content creation, market research), and *operations* (office space, telecommunications). The organization ran two different campaigns—email marketing and LinkedIn ads—last month, where each of these costs was incurred. The number of leads generated per campaign is given.

- 1 Please calculate the cost per lead.
- 2 Which channel is more cost-effective?

Cost Center/Campaign	Email Marketing	LinkedIn Ads
Personnel	\$10,000.00	\$10,000.00
Technology	\$2,000.00	\$1,000.00
Marketing	\$1,500.00	\$2,500.00
Operations	\$1,000.00	\$1,000.00
Number of Leads (in a month)	80	120

Step 2—Lead Qualification

*Traditional Approach*

Before approaching the prospect, sellers qualify them based on specific criteria. They narrow the pool of prospects by scoring them based on their probability of purchase—higher scores indicate a higher likelihood of purchase (Syam & Sharma, 2018). Accordingly, sales representatives reach out to the prospects with the highest scores through email, phone calls, LinkedIn, or in person.

*Shortcomings*

This task is labor intensive, using manual processes, intuition, and limited data (Whitler, 2022). Since a limited number of variables are under consideration, it risks error. Accordingly, lead qualification suffers from inaccurate qualification, time-consuming manual

calls, inconsistent scoring, subjective evaluation, and missed opportunities (Bishop, 2023). Due to time constraints, sales representatives ignore many promising leads.

### *AI-embedded Approach*

Through machine learning models, lead qualification tools create predictive lead scoring (Paschen et al., 2020). From practice, Eloqua by Oracle analyzes B2B lead firmographics, social media activity, website behavior, and past interactions. For example, “+5 points for opening an email, +30 points for matching the ideal customer persona (constructed by AI based on similar customers), –10 points if unsubscribes from email, –15 points if the prospect generates revenue below the seller’s targeted profile (based on previous customers)” (Gillis & Scardina, 2023, p. 2). This objective scoring based on historical data is updated dynamically based on real-time behavior to predict accurate conversion from prospect to customer. Social media tools like Brand24 use natural language processing (NLP) to assess prospects’ sentiments, needs, and keywords in text or speech during their interactions with the organization to predict their intent. Automated email or LinkedIn communication gauges cold prospect interest, allowing experimentation with different messages or efficiently targeting low-value prospects (Bishop, 2023).

### *What Is Different with AI?*

In the traditional approach, lead qualification relies on human intuition and judgment. Even though it is based on experience, it can introduce subjectivity. Using AI, sales representatives receive a list of qualified prospects that are scored objectively using data. Machine and deep learning models constantly analyze lead data on interaction and engagement parameters. Consequently, the forecast accuracy of leads likely to move to the next step in the sales process is higher than the traditional approach. Further, the AI-embedded approach automates data collection from multiple up-to-date sources, which facilitates dynamic lead qualification scores. Using these scores, sales representatives efficiently allocate their time and effort based on likely success rates.

## **Step 3—Lead Nurturing**

### *Traditional Approach*

Organizational customers buy to alleviate pain in their process, solve problems, or enhance productivity (Miller et al., 2011). The sales representative’s job is to uncover each decision maker’s needs, attitudes, values, and concerns, including unidentified ones. In inbound sales, the customer recognizes the need, gathers preliminary details, considers potential solutions, and contacts the seller directly. In outbound sales, sales representatives assess their customer’s needs, habits, and preferences before pitching their product. In both cases, the representative needs to have a customer mindset by thinking like a customer and focusing on their need and motivation rather than the seller’s or self needs (Acuff, 2007).

### *Shortcomings*

Due to limited interaction to understand the customers' needs prior to the approach, sales representatives rely on a reactive approach. Despite using surveys and telephone calls, data is limited. Consequently, sales representatives do not personalize the content or communication (Huntbach, 2024). Further, information on past customer interactions, competitor intelligence, and product knowledge are not readily available during the meeting. Accordingly, representatives depend on their experience and intuition to manually interpret customer requirements and pain points. Despite best efforts, valuable information is lost.

### *AI-embedded Approach*

AI-embedded outreach tools such as Marketo Engage help tailor the sales representative's outreach communication by writing an email draft personalized to the prospect's preferences and needs. Marketo does this by combining prospect scraped information to predict customer segment and needs based on historical data from similar customers. This proactive approach with conditional (If-Then-Else) logic enables sales representatives to present content and offers likely to draw the customer's attention (Paschen et al., 2020).

During the meeting, the goal is to establish two-way communication by asking appropriate questions and listening carefully to the customer's answers. Communication tools such as Zoom and Webex use NLP to take notes and guide the conversation in real time. Further, the transcript highlights vital points during the meeting and summarizes the conversation. AI-embedded *customer relationship management* or CRM software, such as Salesforce Einstein or Zoho Zia, analyze past customer interactions (social media, telephone calls, and emails) using NLP to assess customers' needs, buying intent, product preferences, and complaints. Integrating these insights with customers' purchase patterns and support tickets enables these tools to recommend potential selling opportunities (Microsoft & LinkedIn, 2024). With the rise of generative AI (GenAI), Salesforce Einstein or Microsoft's Viva Sales create prompts, documents (e.g., quotations, invoices), spreadsheets, and PowerPoint slides (Sinha et al., 2023). Competitive AI intelligence tool Owler tracks competitor activity, such as product launches, pricing changes, marketing campaigns, and customer reviews. Representatives uncover changing customer needs and buying preferences from these insights.

### *What Is Different with AI?*

In the traditional approach, sales representatives spend a lot of time arranging meetings. AI-embedded intelligent chatbots automate or semi-automate routine tasks such as scheduling meetings or sending reminder emails, giving sales representatives more time to prepare their product pitches for customers. Using AI, sales representatives have organized insights on customers, products, and competitors that can be retrieved on demand while approaching customers. This helps them to position their product better during customer interactions. Further, customer-related AI insights enable sales representatives to be more targeted and personalized in their product pitches. It helps the representative establish rapport and build trust with the customer from the first approach.

## Step 4—Presentation

### *Traditional Approach*

To get the opportunity to present to the customer is a BIG step. In the presentation, the sales representative needs to capture the interest of the buying center. The opening conversation can make the difference between a second meeting and a lost opportunity (Deeter-Schmelz et al., 2024). After capturing the customer's interest, the sales representative demonstrates how the product solves the problem or alleviates the pain points compared to the competitors' products. The representative should anticipate objections and questions from the customer. Brochures, white papers, testimonials, and other supporting materials establish trust and quality signals. The representative should match the seller's product with the customer's need instead of pushing it.

### *Shortcomings*

In a study on habits conducted with over 5,000 sales representatives over time, the significant shortcomings of sales presentations in the traditional approach are 1) providing much information without explaining the value proposition of the solution, 2) not closing with a call to action from the customer for the next step, 3) not preparing adequately (Sjodin, 2024). Since the presentations are generally delivered in person, it limits the sales representative's ability to address each person's concerns and get feedback on their presentation.

### *AI-embedded Approach*

AI presentation tools like Prezi Business generate presentations tailored to the specific audience once integrated with CRM and marketing automation platforms like Salesforce and Clevertap, respectively. The AI-powered sales presentation highlights relevant features and benefits that resonate with customers' needs. AI adds content that updates in real time, creating a data-driven presentation with interactive content. Further, these tools track the audience's engagement with the content and update the sales representatives for continuous improvement. AI coaches such as Gong and NICE monitor the sales representatives' interaction with customers. They take a dual role—capturing the *voice of customers* regarding needs, issues, and sentiment and recommending representatives on active listening, emotion, product, and price. For example, it asks a representative to lower their voice if it detects that they are speaking outside their typical bandwidth.

GenAI tools utilizing large language models such as ChatGPT, Gemini, and Copilot create charts and content during presentations. The representative can prepare for the meeting by roleplaying with ChatGPT. For example, the sales representative can prompt, "Assume you are my sales coach. Based on what you know about Customer X, ask me a few questions to test my understanding of their product and give me feedback based on my responses." Alternatively, generic role-playing of typical sales scenarios for targeted improvement can be done. The representative can assign personalities to ChatGPT in a negotiation, e.g., be hard and defensive yet interested (Sinha et al., 2023). Image generator

models like DALL-E 2 and Midjourney create illustrations, graphics, and videos. A few elements in the presentation still need to be performed by the sales representative, such as clarifying objections and closing with a persuasive message or commitment to moving forward (Sinha et al., 2023).

### *What Is Different with AI?*

In the traditional approach, sales representatives spend time, resources, and effort to create presentations. They get audience feedback post-presentation, if at all. Using GenAI, representatives generate and deliver customized presentations that automatically incorporate up-to-date insights. Representatives receive real-time guidance on their interaction performance, which enables them to make changes to the product pitch at the right time and deliver value. Additionally, AI captures audience engagement to note customer objections and positive points for further assessment in the next meetings. For training purposes, representatives can personalize their preparation by assigning specific scenarios and customer personalities to GenAI tools like ChatGPT.

## **Application 7.2 Answering Questions and Resolving Objections During Sales Presentations**

Even with AI-enabled presentations, the success of the sales presentation depends on the representative. The key tasks are 1) answering questions, 2) resolving objections, and 3) delivering a persuasive value proposition. How can you, as the sales representative, respond to each of these objections?

- 1 Your competitor does the same thing for half the price.
- 2 Let us wait until next year to look at this again.
- 3 The return on investment is different from where it needs to be.
- 4 We already have a supplier for what you sell.
- 5 We do not have money in the budget.

Craft your responses using GenAI tools. Remember to:

### **Listen**

- Actively listen to the customer's entire concern.
- Pay attention to nonverbal cues like body language and tone of voice.

### **Acknowledge**

- Let the customer know you understand their needs or issues.
- Do not dismiss or downplay their objection.



**Explore**

- Use open-ended questions to delve deeper into the objection.
- Open-ended questions can uncover the reason behind the concern.

**Respond**

- Address the objection directly with a clear and concise response.
- Highlight how the product caters to the customer's specific needs.
- Give the customer time to process, evaluate, and ask follow-up questions.
- Confirm that the customer's objections are alleviated.

**Step 5—Negotiation***Traditional Approach*

Before a purchase is made, generally, the sales representative and the customer negotiate pricing, place, quality, and quantity specifications. Negotiation is a bargaining process focused on reaching a mutual agreement or compromise adhering to specifications. Usually, the purchase manager leads the negotiation from the customer's side, simultaneously contacting multiple sellers to access information, compare offers, and gain the upper hand. Negotiation can be stressful, and parties can get confrontational as responses and commitments are expected in real time. However, the good news is that it can be learned, practiced, and improved.

*Shortcomings*

Sometimes, the sales representative is unable to prepare rigorously due to time constraints. Then, the representative relies on experience, industry benchmarks, and manual calculations related to pricing and discounts during negotiation. This subjectivity, along with limited data, leads to suboptimal deals. The sales representative can often be pushy, neglecting the customer's perspective (Gavin, 2018).

*AI-embedded Approach*

AI-enabled CRM tools reduce the representative's information gap with insights regarding product suitability, pricing flexibility, profit margins, target revenue achievement, and expected delivery predictions. Further, digital sales rooms such as GetAccept can be integrated with CRM systems as a collaboration platform between the seller and buyer teams. GetAccept has an Engagement scoring feature using a classification algorithm that helps representatives gauge the likelihood of closing a purchase. It delves into the factors that result in a particular score, such as customer activity or email open rate (GetAccept, 2017). Historical data on thousands of deals with multiple successful and unsuccessful parameters was used to train the algorithm. GenAI allows parties to orchestrate complex deals while simplifying contract terms and legal jargon. New contracts are drafted faster, shortening the time to deal closure (Sinha et al., 2023).

In addition to deal closure, AI price optimization tools such as Pricefx suggest optimal pricing and strategies during the negotiation based on historical sales data, competitor pricing, and market trends. It follows competitors' price positions dynamically, noting minute changes. Pricefx considers customer size, industry averages, and negotiation history to recommend the best price that maximizes revenue, return on investment, and profit (Pricefx, 2024).

### *What Is Different with AI?*

Representatives access insights that assist in differentiating their product and brand during negotiation, unlike the traditional approach, which depends on representatives' charm, intuition, manual calculations, and memory. Using AI tools and additional information on the customer's situation and needs, representatives craft negotiation strategies customized to their situations. Collaboratively using GenAI trained on historical contractual agreements, seller and customer teams draft contracts with greater efficiency and accuracy and less conflict. Further, digital sales rooms create greater activity transparency during negotiations.

## Step 6—Closing the Sale

### *Traditional Approach*

Closing the sale implies the customer raises a purchase requisition or order. The focus of the sales representative changes from the customer to the seller's departments to fulfill the order. The representative also coordinates with the wholesaler to check if the item is available in their inventory. If not, the wholesaler or representative places an order in the organization's enterprise resource planning (ERP) software that connects different departmental processes in finance, supply chain, and operations.

### *Shortcomings*

Sales representatives build relationships and trust with their customers depending on their ability to guarantee a smooth closing, which includes contractual agreements, payment schedules, product specifications, inventory checks, transportation, and delivery. Legacy systems without AI cannot establish accurate delivery times due to a lack of real-time weather, warehousing, and transportation updates. This gap between the promised and actual product delivery time creates contractual/production bottlenecks. It also jeopardizes the payment schedule, customer's commitments, and loss due to spoilage.

### *AI-embedded Approach*

ERP systems with AI integration extract data from invoices and purchase orders, verify the data, and flag for manual review if anomalies are detected. It automates processes such as informing warehouses and sending customers emails at every delivery step. ERPs combine data from different organizational functions and augment data with other systems (e.g., weather and CRM). Such augmentation increases accuracy of delivery time forecast. Informing the customer the accurate delivery and logistics-related details is critical for the sales representative to build trust. GenAI produces reports, charts, infographics,

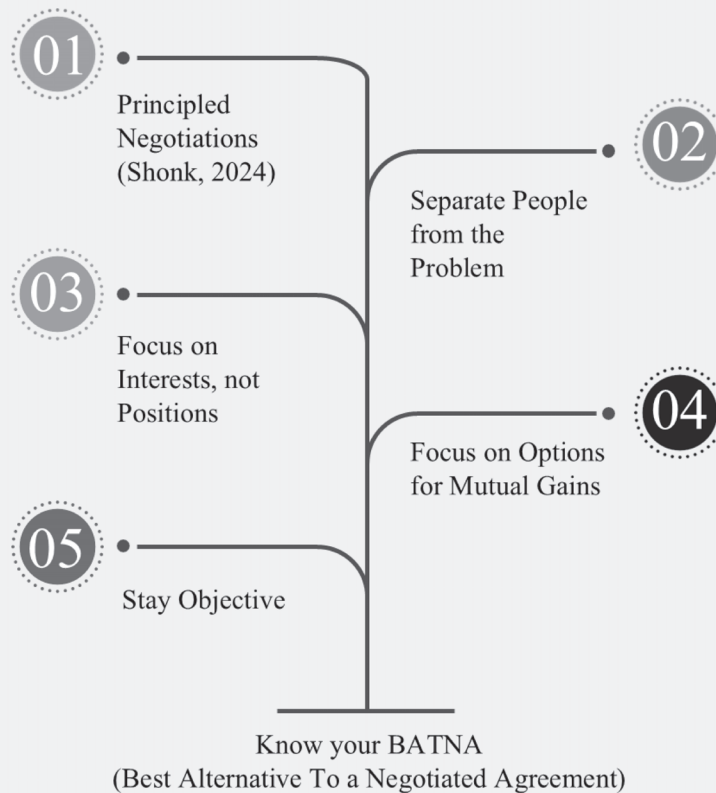
Conceptual Selling (Miller et al., 2011)

Focus first on the customers – learn more about them (rather than selling the product first).

Draw out customers' interests and the results they want (rather than overload them with information).

Use customer knowledge to differentiate yourself from the competition rather than criticize them.

Focus on the customer's need-product fit which minimizes price competition.



**FIGURE 7.4** Negotiation Best Practices

slides, images, and videos to provide contextual conclusions and recommendations (Ng & Causey, 2024).

### *What Is Different with AI?*

Compared to the traditional approach, there is less interaction, particularly face-to-face interactions, between sales representatives and staff from other departments due to automated processes and AI chatbots handling inquiries. Lower interaction can weaken the relational bond. Therefore, sales representatives should proactively nurture these relations to maintain a strong organizational culture while using AI tools. On the other hand, due to integrated software systems, sales representatives, staff, and customers have accurate and updated inventory positions and delivery schedules. For salesforce management, AI is used to classify sales representatives from laggards to stars based on an assessment of their performance. This assessment takes into account objective parameters using granular process-level data. It differs from subjective human managerial evaluation in the traditional approach, which can be biased.

## Step 7—After-sales Service

### *Traditional Approach*

It is good practice for sales representatives to keep the relationship with the customer alive even after the sale. It costs an organization approximately five times more to acquire a new customer vs retaining an existing customer (Fader, 2020). According to the 80/20 Pareto rule, 80% of the seller's revenue comes from 20% of its key customers (Myers, 2021). Key accounts need special attention for retention and growth in Customer Lifetime Value (CLV) to help achieve the representative's performance target. After-sales service is an established way for the representatives to contact the customer's buying center regularly. The sales representative must be available to resolve product issues and follow up with new solutions. When dissatisfied, customers do not give feedback if they do not have a strong relationship but take revenge by moving to a competitor (Hyken, 2020). After-sales service builds relationships that representatives can leverage in *up-selling* and *cross-selling* during future customer requirements.

### *Shortcomings*

The trend is toward digitalization and virtual interactions, limiting the physical presence of the sales representatives at the customer's premises. This distance makes it difficult for the representative to be aware of new problems that arise (Veritek, 2024). At the same time, physically reaching out to customers takes away time and resources from key accounts and new lead generation.

### *AI-embedded Approach*

Account-based marketing platforms such as Terminus and Demandbase utilize AI to transform key account management into a data-driven targeted strategy for retaining high-value accounts. AI builds rich customer profiles by combining structured data from databases and unstructured data from websites, popular media, and annual reports. AI uses

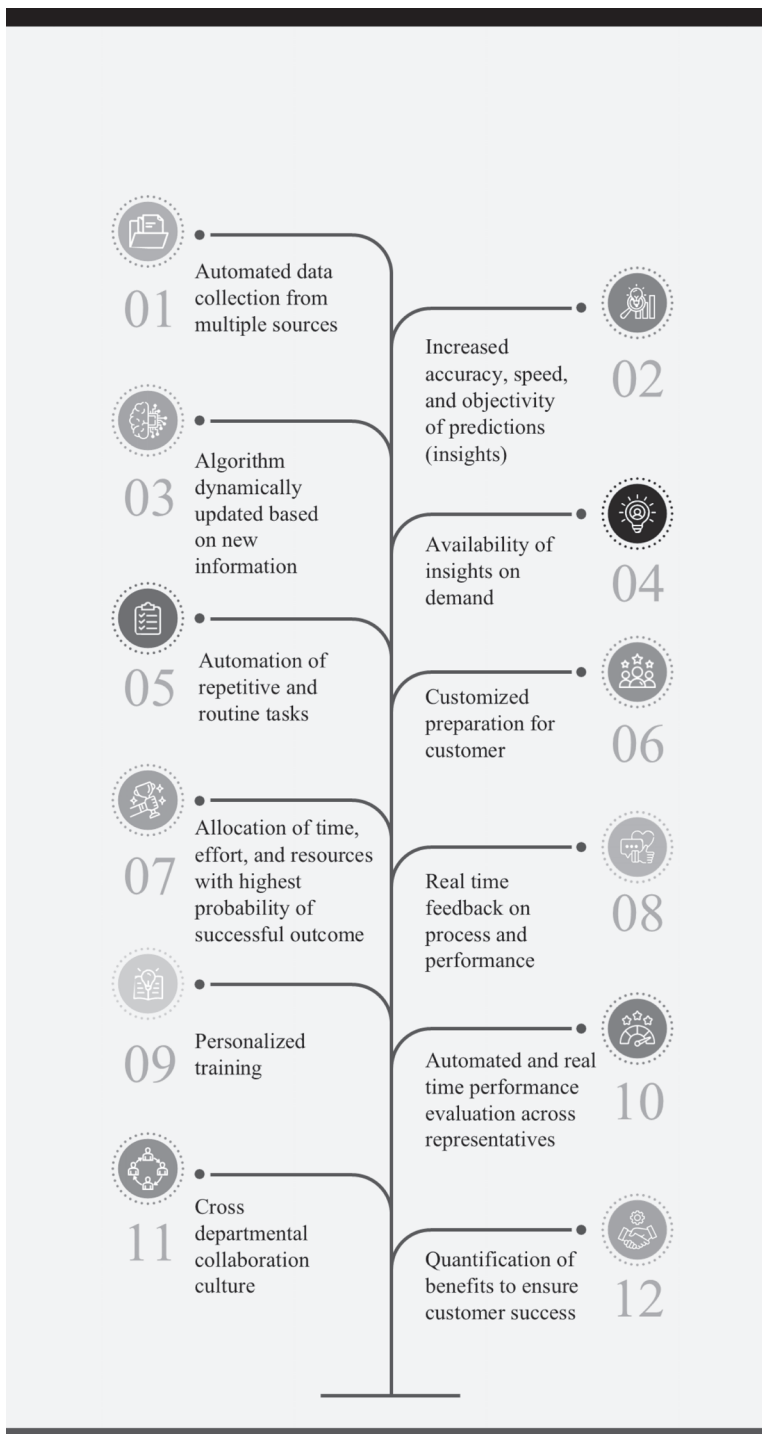
this rich data to predict future purchases, revenue growth or decline, customer attrition, and service issues (Vamsi, 2017). This prediction is based on either 1) other customers with similar purchase histories and recommends products that those similar customers have bought (across user learning) or 2) the characteristics of the key account's previous purchases or preferences and recommends similar items (within user learning) or 3) a combination of both (Hagiu & Wright, 2023). Using these customer profiles, AI aids sellers' segmentation, market research, and feedback collection.

In another application of AI in content curation, digital communication platforms, such as Seismic LiveSocial, use sales representatives' social media activity as input to search through millions of media articles daily to identify relevant content. Representatives review the curated content and share it with their customers when appropriate. The algorithm tracks the content that customers interact with, which yields insights into their interests. This application of AI transforms the representative from a salesperson to a subject matter expert. Many sellers use LiveSocial with LinkedIn Sales Navigator, a tool for finding and engaging leads. Quoting Dickie et al. (2022, pp. 15–16),

Account executives who have harnessed both tools report significantly higher closing rates and higher average deal sizes. They also see a 20% increase in their LinkedIn Social Selling Index (SSI) scores, a measure of sales effectiveness. SAP account executives with the highest SSI scores, in turn, have seen a 55% increase in their sales performance, close 3.6 times more deals than their peers do, and make deals that are 516% larger than those of their peers. In addition, they are 3.4 times more likely to achieve or exceed their sales quotas.

Further, AI can create workflows that automate repetitive tasks using *scripts*, freeing up sales representatives' time. For instance, a customer can get assistance from a chatbot instead of a representative if they need a resolution urgently. If insufficient, the chatbot can transfer the customer to the support team. Detailed records of these interactions facilitate follow-ups by the representatives.

Customer success, the seller's proactive approach that focuses on ensuring the customer achieves their desired outcomes with the product, is a critical element of after-sales service (Prohl-Schwenke & Kleinaltenkamp, 2021). It involves regular check-ins, consultations, and optimization strategies as well as identifying new customer needs. Sales representatives benefit from AI insights to ensure customer success. For example, digital twins, computer programs that use real-time data from sensors to create virtual representations of physical devices using AI, are increasingly used in B2B customer success. Rolls Royce deploys different types of sensors (e.g., temperature, biological) and 3D cameras in devices (e.g., jet engine) at the customer's premises. These sensors measure how these devices are working, which enables the digital twin to mirror its physical engine's behavior (Olavsrud, 2022). AI leverages this data to provide preventative maintenance recommendations and reduce inventory for spare parts. Such insights are crucial for developing trusted relationships between the representative and the customer. AI powered customer success tools such as Planhat help in onboarding, up-selling, cross-selling, and smooth account management. See Figure 7.5 for a summary of the changes due to AI across the sales process.



**FIGURE 7.5** What's Different with AI Across the Sales Process for Sales Representatives

### *What Is Different with AI?*

Due to limited physical interactions compared to the traditional approach, representatives may face difficulty building relationships and earning customers' trust. Thus, they must develop digital communication strategies utilizing data and GenAI. One strategy is a proactive data-driven strategy centered on customer success. This approach yields revenue growth and account development, though in the long term. Accordingly, representatives coordinate with customer success, marketing, and data analytics teams to enable after-sales activities. Closer coordination necessitates breaking away from territory-specific siloed thinking of the traditional approach. In addition, sales representatives need to be comfortable quantifying the customer's benefit using metrics (e.g., cost-benefit analysis, return on investment, time to break even). In sum, AI-embedded tools have shrunk the sales process by incorporating multiple steps in one tool, making the sales process faster and more integrated.

#### **Application 7.3 Konnect AI-Sensor Insights**

Imagine you are a sales representative for Konnect, a software organization that has developed a digital twin software called AI-Sensor Insights. It is an AI-powered tool that simulates the physical asset. You sold AI-Sensor Insights to General Autos, a global automaker selling a wide range of vehicles. Now, you need to draft the first communication to the decision-maker after the sale.

In a generative AI tool of your choice, prompt it to:

- 1 Write a friendly welcome note for General Autos joining the Konnect family. Highlight how Konnect's AI-Sensor Insights will transform their operations by providing powerful insights into their physical assets.
- 2 Provide assurance about the company's commitment to transparency and data security.
- 3 Describe the specific ways AI-Sensor Insights can benefit General Autos, such as in predictive maintenance, improving efficiency, and detecting issues early.
- 4 Explain the key performance metrics that AI-Sensor Insights will track to demonstrate its value, like reductions in downtime or improvements in quality.
- 5 Write a closing statement for the welcome note. Mention how Konnect will ensure a smooth onboarding process with a clear implementation plan and dedicated customer support.

#### **Tips**

- For digital trust, communication content should focus on transparency, data security, privacy, expertise, and personalization.
- For customer success, map the customer's anticipated needs and goals.
- Expand on the metrics that are necessary to give customers feedback, training, and support.

## Impact of AI on Business-to-Consumer (B2C) Sales

AI is impacting sales beyond the B2B sales process. In the Business-to-Consumer (B2C) scenario, the sales representative interacts with an individual customer who is likely to be the decision-maker, at most influenced by family members or friends. In general, other characteristics of B2C vis-a-vis B2B sales are 1) lower order value, 2) lower complexity, and 3) shorter cycle. The representative emphasizes the emotional connection with the product and the brand along with functional value to the customer. We observe a shift toward digital purchases in B2C sales through e-commerce platforms, social media, and organization websites or apps. Since this chapter focuses on frontline workers, we focus on the vital role AI plays in assisting sales representatives in the following aspects (Anderson, 2024):

### Personalization

AI segments customers based on their needs, CLV, and interests. The sales representative uses segmentation to recommend products that are relevant to the customer. AI enriches the segmentation by creating personalized customer profiles of existing customers using their transactions, social media, web browsing, and interaction data. The representative draws on these profiles to communicate or recommend products in a manner that the customer is likely to convert. The data is absent or limited for new customers, which can be challenging. In those cases, AI identifies the segment and preferences of the new customer based on existing customers who share similar characteristics (e.g., demographics, income, home address, interests). For example, capturing a new customer's location indicates property value, which correlates to high- or low-margin product purchases.

### Loyalty Management

After the purchase, the seller still wants to maintain a relationship with the customer to promote loyalty (Kumar et al., 2010). AI can help in loyalty management by customizing email communication, targeting ads, tailoring product recommendations, and personalizing offers to the customer. These efforts push some customers to buy from the organization again. In subsequent sales encounters, the representative, who may be different from the one who sold the product, can use omnichannel promotion to deepen the relationship. If empowered, the representative can upgrade or offer a discount to a high-value customer. Loyal customers are more likely to accept AI-enabled up-selling and cross-selling offers, which cultivate profitable loyalty (Kumar et al., 2010). In another application, the trove of integrated transaction and interaction data enables AI to predict when a customer will likely buy or churn (Miceli, 2024). The sales representative's intervention facilitates conversions or prevents churn, respectively.

### Customer Experience

AI extracts knowledge from unstructured feedback reviews, surveys, and social media comments. Utilizing NLP models, AI gauges customer sentiment, identifies specific entities, and summarizes key points. Companies use this insight to train sales representatives



by addressing common questions or pain points. AI also elevates the customer's interactive experience. In fashion or apparel sales, the representative guides the customer to try products virtually, gather customer preferences through interactive quizzes, and demonstrate using augmented reality and virtual reality tours. Computer vision algorithms enable virtual experiences by recognizing images of customers and products to create realistic visualization. GenAI helps representatives in content creation for personalizing communication or generating interactive elements in games or quizzes.

## OPTIMIZING AND STREAMLINING SALES WITH AI

Big data is here to stay due to the continued adoption of sensors, connected devices, wearables, and web scraping. It will be analyzed in real-time using ever-more-powerful AI algorithms. Sales representatives must adjust to this new normal in customer expectations and service delivery. AI will lend some help, of course, with customer prioritization, predictive service updates, and personalization advice.

Relatedly, sales representatives will increasingly interact and work beside AI-powered coworkers such as algorithms, chatbots, drones, and robots, which are becoming more autonomous, adaptable, and intelligent. These “coworkers” can perform complex tasks in dynamic environments (e.g., order fulfillment, delivery, customer service). Yet, based on observations thus far (Karlinsky-Shichor & Netzer, 2024), sales representatives will be part of a hybrid workforce. Therefore, AI works in tandem with human representatives as a “copilot” rather than a replacement. Sales require skills that give humans an advantage over AI. These are communication, judgment, emotional intelligence, creativity, complex problem-solving, and critical thinking—skills AI cannot replace yet (Shine, 2023). Companies must hire and train sales representatives based on these skills. According to Shine (2023), the following skills set human sales representatives apart:

- 1 **Communication Skills:** Sales representatives excel at understanding and conveying subtle nuances, context, and implied meanings in communication during prospecting, lead nurturing, and negotiation. Further, they build rapport during the sales process, particularly after the sale.
- 2 **Judgment:** Sales representatives rely on intuition, ethics, and past experiences to make informed judgments during prospecting, sales approach, objection handling, and closing deals.
- 3 **Creativity:** Humans are capable of original thought, imagination, and abstract reasoning. Sales representatives form a relationship with their customers, which makes them partners in solving customers' problems creatively and proposing innovative solutions.
- 4 **Emotional Intelligence:** Sales representatives need to understand customer emotions (e.g., frustration) and respond empathically while regulating personal emotions. Emotional intelligence fosters trust and builds relationships.
- 5 **Complex Problem-solving:** When solving complex problems, sales representatives need to consider multiple perspectives beyond the recorded knowledge base, considering both tangible and intangible elements.

- 6 Critical Thinking:** Sales representatives must critically evaluate information, question assumptions, and identify biases to reason and draw inferences logically. Critical thinking helps in better decision-making by considering the customer's interests while safeguarding their goals.

Organizations that invest in their sales representatives by training them in technical (i.e., AI, data science) and human skills (above) will reap immense benefits. Combining AI insights with human characteristics, representatives can expect better outcomes in multiple facets of sales. First, adopting AI can take over many non-selling tasks, freeing representatives' time for creativity and innovation. Sixty-eight percent of the sales representative's time goes into repetitive administrative work such as documentation, quotations, and emails (Dickie et al., 2022). By one estimate, there is scope for 25–50% productivity improvement (Fifield, 2010). Second, armed with AI insights, sales representatives can personalize the sales process and after-sales service, which will help build long-term profitable relationships. For example, alerting the customer to a maintenance issue before its occurrence will save costs and reduce the loss of productive capacity for the customer. Third, as sales representatives better understand customer needs and track the customer's experience across the journey, AI is likely to enhance customer satisfaction. Any deviations from a smooth experience are captured in real time. Sales representatives proactively intervene with a solution to overcome the obstacle, ensuring the customer is always satisfied. Fourth, AI insights and recommendations are data-driven and more objective than human intuition or judgment. Using critical thinking, sales representatives can make the right decisions considering analytical and emotional aspects.

## OVERCOMING AI CHALLENGES IN SALES

Along with the opportunities, AI also brings a host of challenges that are likely to bring profound implications. These challenges confront governments and organizations as AI becomes the underlying technology for global infrastructure. Accordingly, these macro challenges have to be solved with cooperation among global stakeholders (e.g., World Economic Forum's AI Global Alliance, United Nations' AI Advisory Body, Brick and Road Initiative's Global AI Governance Initiative). At a micro-level, sales representatives in organizations will have to tackle these challenges with personal initiative, adaptability, and critical thinking.

### Job Displacement

Reports suggest massive job displacement due to AI. The current generation of AI algorithms (including GenAI) is replacing tasks, particularly repetitive (e.g., customer service, telemarketing), analysis/decision (e.g., marketing automation, data analysis), and creation (e.g., content, email, graphic design) (Kelly, 2023).

### Good Practice

Organizations will continue to adopt the latest AI applications or customize them for their processes. However, they may be unable to train frontline workers consistently due

to time or resource constraints. Accordingly, the onus is on sales representatives to adapt to new AI-embedded sales technologies through upskilling and reskilling.

## **Algorithmic Bias**

Systematic errors in AI output create unfair outcomes for certain groups of people due to biased data or algorithms. Training data can be biased due to being inconsistent (e.g., measurements in different units); narrow (e.g., not including minorities adequately); or incomplete or due to errors in labeling (in case of supervised learning, a cat labeled as a dog) (Lee et al., 2019).

### **Good Practice**

Before reaching the presentation stage, the sales representatives should verify the customer's needs and issues. They need to use their judgment, critical thinking, and problem-solving skills to separate biased outputs from unbiased ones.

## **Cognitive Overload**

When there is too much information to process, one can reach a point of information paralysis, i.e., being unable to process and then act on it (Schimming, 2022). AI automates or fastens data collection, generation, processing, and analysis, implying continuous information updates.

### **Good Practice**

Sales representatives should utilize dashboards to get real-time data. They can organize the flow of AI insights to coincide with the immediate requirements. Integrating applications (e.g., CRM software) rather than using standalone ones is better.

## **Algorithmic Management**

Increasingly, salesforce control systems for monitoring, evaluation, incentivization, and reward/punishment will be algorithms rather than humans, which do not consider context, explainability, ethics, and privacy (Möhlmann et al., 2021). For example, a sales representative may be aggressive on pricing due to inside information regarding the customer's intent. The algorithm that penalizes the representatives' conduct does not consider this aspect.

### **Good Practice**

The algorithms should be designed with the organizational justice principles of distributive, procedural, and interactional justice (Lahiri et al., 2023). Additionally, managers need to empower their sales representatives to ignore or override the algorithmic recommendation or direction when appropriate.

## Algorithmic Aversion

Biased assessment of an algorithm's output manifests in negative behaviors and attitudes toward the algorithm, i.e., lower acceptance of the algorithm's recommendation even though it is better than a human's recommendation (Dietvorst et al., 2015). Such aversion is a problem as sales representatives, particularly experienced and star performers, are likely to overrule predictions or prescriptions that help them or their organization (Luo et al., 2021). On the other hand, sales representatives may trust AI outputs without critical evaluation.

### Good Practice

A movement toward explainable AI focuses on making AI models' decision-making processes/results more understandable and decipherable (Turri, 2022). Representatives can then make informed decisions.

## Privacy and Ethics

Automated data collection and the requirement of massive training datasets can violate consumer privacy and copyrighted materials (New York Times, 2023). This violation is amplified with the adoption of GenAI.

### Good Practice

Sales representatives need to be cautious with the organization's confidential data, code, or intellectual property rights. Ethical data collection and explainability in algorithms will reduce ethical dilemmas. In the interim, sales representatives will struggle with algorithms' decisions, especially when they conflict with their intuition, experience, or judgment.

## IMPLICATIONS FOR SALES PROFESSIONALS

The rapid integration of AI into the sales process has several implications for sales professionals. First, managers will focus more on the process in addition to the traditional focus on sales representative performance outcomes like revenue and CLV. The availability of activity-based metrics such as the number of calls or emails gain prominence as they are captured and analyzed using AI. Second, in addition to capturing data, there will be real-time tracking of sales representative performance. It allows sales managers to identify areas for immediate feedback using dashboards. The caveats are increased monitoring, pressure to comply with algorithmic output, and micro-detail comparisons between coworkers. Third, sales representatives are likely to be assigned higher performance targets. Managers will emphasize the time savings and reduction in non-selling tasks with AI automation and integration to justify the targets. Fourth, sales representatives are likely to get less human managerial support with AI taking on support (e.g., HR chatbot) as well as supervisory (e.g., algorithmic management) roles. Finally, sales teams will integrate data scientists or

AI specialists to work alongside representatives to develop customized AI solutions. While it improves productivity, it puts pressure on representatives to keep up with data science innovations.

## CHAPTER SUMMARY

B2B organizations must anticipate that their competitors will also adopt AI technology and other complementary technologies such as sensors, the Internet of Things, and the cloud. Therefore, the sustainable competitive advantage will come from:

- 1 Sales representatives' ability to utilize the insights generated by AI to create a differentiated value proposition in the customer's mind. AI insights can elevate price and non-price-based differentiation: Product, service, place, brand, and relationship.
- 2 Focus on personalized relationship building with the customers' buying center, particularly with key accounts and customers with high customer lifetime value. Sales representatives need to address business situations independent of AI.
- 3 Train representatives on machine learning and AI fundamentals to parse out which insights to follow and which to disregard (e.g., inconsistent and inaccurate answers by ChatGPT).
- 4 Generative AI models work best for sales teams when they are customized and fine-tuned to organization-specific data and contexts, which can be expensive but more accurate.
- 5 Training sales representatives to navigate continuous AI insights without getting cognitively overloaded. Despite the rapid adoption of AI, many representatives do not fully utilize AI insights (Dickie et al., 2022).
- 6 Human-centered salesforce management with redressal of concerns and provision of feedback.

## KEY TERMS

- **Cross-selling:** Selling additional products to existing customers based on their requirements or previous purchases.
- **Customer journey:** The customer's entire experience through all the omnichannel touchpoints when interacting with the seller's brand or product.
- **Customer Lifetime Value (CLV):** A forward-looking metric that estimates the total profit a customer is expected to generate throughout the relationship with the organization.
- **Customer Relationship Management (CRM):** Software helps organizations manage all aspects of their customer interactions and relationships.

- **Omnichannel:** The seamless and effortless customer experiences that occur within and between interaction channels such as in-store, social media, and mobile app.
- **Script:** A program or sequence of instructions carried out by another program.
- **Up-selling:** Encourages customers to buy a more expensive version of the product than they originally intended.

## DISCUSSION QUESTIONS

- 1 Think back to an experience with a sales representative. What are the aspects of the experience you enjoyed and disliked?
- 2 How should the sales representatives adapt to AI-related job displacement?
- 3 What is it like to work with robots or virtual assistants as teammates?
- 4 What is the role of sales representatives in providing an enhanced customer experience in technology-mediated environments?

**TABLE 7.2** AI and Online Resources for Sales

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Bombora</b>	<a href="https://bombora.com/sales-intelligence-and-revenue-acceleration/">https://bombora.com/sales-intelligence-and-revenue-acceleration/</a>	Bombora's is a B2B Intent data solution that provides sales and marketing teams with actionable insights across the customer journey.
<b>Brand24</b>	<a href="https://brand24.com/ai-insights/">https://brand24.com/ai-insights/</a>	Real time brand related updates for mentions, sentiment, and competitor actions.
<b>ChatGPT for Sales</b>	<a href="http://www.cognism.com/blog/chatgpt-sales">www.cognism.com/blog/chatgpt-sales</a>	B2B lead provider tool with global reach and GPT dedicated to sales.
<b>Clevertap</b>	<a href="https://clevertap.com/customer-data-and-analytics/">https://clevertap.com/customer-data-and-analytics/</a>	Clevertap is a customer data analytics tool that builds automated segments and real time analysis of customer behavior.
<b>Gemini</b>	<a href="https://gemini.google.com/app">https://gemini.google.com/app</a>	Large language model by Google.
<b>GetAccept</b>	<a href="https://shorturl.at/Fi6tD">https://shorturl.at/Fi6tD</a>	Digital collaboration platform with AI enabled insights and contract management.
<b>Gong Sales Coaching</b>	<a href="https://tinyurl.com/5n9akzv5">https://tinyurl.com/5n9akzv5</a>	AI coach for sales representatives that analyzes interactions and provides recommendations in real time.

(Continued)

TABLE 7.2 (Continued)

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Harvard Business Review</b>	<a href="https://hbr.org/topic/subject/ai-and-machine-learning">https://hbr.org/topic/subject/ai-and-machine-learning</a>	<i>Harvard Business Review</i> (HBR) is a general management magazine published by Harvard Business Publishing, a not-for-profit, independent corporation that is an affiliate of Harvard Business School.
<b>Hubspot CRM</b>	<a href="https://shorturl.at/LgA2u">https://shorturl.at/LgA2u</a>	HubSpot is an AI-powered customer relationship management platform that can be integrated with other marketing, sales, and customer service tools.
<b>Hubspot</b>	<a href="https://blog.hubspot.com/sales/ai-sales-tools">https://blog.hubspot.com/sales/ai-sales-tools</a>	Hubspot's sales intelligence tool, which delivers tailored messaging, automates sales activities, and tracks sales performance for data-driven insights.
<b>International Labour Organization</b>	<a href="http://www.ilo.org/artificial-intelligence">www.ilo.org/artificial-intelligence</a>	The International Labour Organization is a United Nations agency whose mandate is to advance social and economic justice by setting international labor standards.
<b>Leadfeeder</b>	<a href="http://www.leadfeeder.com/lead-generation-software/">www.leadfeeder.com/lead-generation-software/</a>	A Finnish company that generates leads by identifying anonymous website traffic.
<b>LinkedIn Sales Navigator</b>	<a href="https://shorturl.at/RUSqF">https://shorturl.at/RUSqF</a>	LinkedIn Sales Navigator is a premium sales solution that provides advanced search capabilities, enhanced insights, and targeted lead recommendations.
<b>Marketo Engage</b>	<a href="https://business.adobe.com/products/marketo.html">https://business.adobe.com/products/marketo.html</a>	Marketo Engage is an AI-enabled marketing automation platform that helps sales teams scale personalized buyer engagement and grow revenue.
<b>Microsoft Copilot</b>	<a href="https://blogs.microsoft.com/blog/2023/03/16/introducing-microsoft-365-copilot-your-copilot-for-work/">https://blogs.microsoft.com/blog/2023/03/16/introducing-microsoft-365-copilot-your-copilot-for-work/</a>	Microsoft 365 Copilot is a large language model that combines the power of large language models with your data in the Microsoft Graph and the Microsoft 365 apps.
<b>NICE Sales Agent Assist</b>	<a href="http://www.nice.com/products/agent-assist">www.nice.com/products/agent-assist</a>	It is an AI-powered coach that assists call center agents during customer interactions.
<b>Open AI Dall-E 3</b>	<a href="https://openai.com/index/dall-e-3/">https://openai.com/index/dall-e-3/</a>	DALL-E 3 is a text-to-image generation model that generates high-quality images across various domains.
<b>Oracle Eloqua Marketing Automation</b>	<a href="http://www.oracle.com/cx/marketing/automation/">www.oracle.com/cx/marketing/automation/</a>	It is a marketing automation tool that helps segment and target by connecting multiple marketing channels.
<b>Owler</b>	<a href="http://www.owler.com/corp">www.owler.com/corp</a>	It is a prospecting tool that is focused on exclusive company and industry insights for competitor intelligence.

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Prezi AI Presentations</b>	<a href="https://shorturl.at/jt8xa">https://shorturl.at/jt8xa</a>	Prezi is a generative AI tool that specializes in creating and refining presentations.
<b>Pricefx</b>	<a href="https://shorturl.at/nOmGf">https://shorturl.at/nOmGf</a>	AI-powered pricing software that supplies data-driven prices, rebates, and quotes with effective sales guidance.
<b>Salesforce AI Assistant</b>	<a href="https://www.salesforce.com/artificial-intelligence/einstein-ai-assistant/">www.salesforce.com/artificial-intelligence/einstein-ai-assistant/</a>	AI agent, which helps in researching and performing sales and customer-related tasks with low code.
<b>Salesforce Sales AI</b>	<a href="https://www.salesforce.com/sales/all-products/">www.salesforce.com/sales/all-products/</a>	Salesforce is a leader in customer relationship management and sales intelligence, including analytics, pricing, revenue management, and salesforce management.
<b>Stable Diffusion</b>	<a href="https://stability.ai/">https://stability.ai/</a>	Stable Diffusion is a deep learning, text-to-image model.
<b>World Economic Forum</b>	<a href="https://intelligence.weforum.org/topics/a1Gb0000000pTDREA2">https://intelligence.weforum.org/topics/a1Gb0000000pTDREA2</a>	The World Economic Forum is a global organization that works toward public-private cooperation.
<b>xiQ</b>	<a href="https://xiqinc.com/solutions-sales/">https://xiqinc.com/solutions-sales/</a>	xiQ is a sales intelligence software that utilizes the neuroscience of buying in guiding sales representatives.
<b>Zoho</b>	<a href="https://www.zoho.com/crm/crm-plus/?src=zGlobalAllProducts">www.zoho.com/crm/crm-plus/?src=zGlobalAllProducts</a>	It is a customer relationship management software that specializes in omnichannel customer engagement.
<b>Zoominfo</b>	<a href="https://www.zoominfo.com/products/sales">www.zoominfo.com/products/sales</a>	Zoominfo is a B2B prospecting database where sales teams can target their ideal customer profiles and reach decision-makers based on matches.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



**FIGURE 7.6** QR Code to Online Support Material



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# New Product Development Enriched with AI

*Krystyna Jarek*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Understand how to use generative artificial intelligence (AI) in the new product development (NPD) process.
- 2 Use the prompt design to tap into the knowledge base of innovation, NPD, and the innovation ecosystem.
- 3 Differentiate two AI concepts in the NPD process: “Innovate with AI” and “Innovate for AI” to use them effectively.
- 4 Evaluate the ethical aspects of AI in innovation design, development, and implementation stages to create trustworthy AI innovation.
- 5 Recognize AI challenges connected with legal, data security, and reputational risks.
- 6 Describe the set of skills essential in an AI-augmented NPD work environment.

## INNOVATION FOR EVERYONE

Definitions of the New Product Development (NPD) process range from discovering new market opportunities (Ulrich & Eppinger, 2015), generating ideas and concepts through solution design and development, commercialization and sales (Crawford & Di Benedetto, 2006), to creating innovation in a disciplined process (Brown & Eisenhardt, 1995) to satisfying customer needs (Cooper, 1990).

Creating innovation is a complex process, and a well-planned and coordinated effort is required to develop new products or services successfully. The Stage-Gate approach was

one of the first concepts for systematic and process-oriented innovation framework (Cooper, 1990). The Stage-Gate process initiated the launch of other concepts to create innovation in a structured way, contributing to the emergence of many different methods, such as Design Thinking (Brown, 2008), Open Innovation (Chesbrough, 2003), Blue Ocean Strategy (Kim & Mauborgne, 2004), Business Model Canvas (Osterwalder & Pigneur, 2010), and Ten Types of Innovation (Keeley et al., 2013).

The emergence of innovation frameworks innovations took place in the following years as a result of emerging technologies, changing consumer and market needs, and new contexts related to sustainable business: Service Design (Stickdorn et al., 2018), Customer Journey Map (Rosenbaum et al., 2017), Systemic Design Framework (Design Council, 2022).

Moreover, large global corporations are introducing their NPD process methodologies tailored to the industry, challenges, ambitions, and their innovation strategy. Some examples are the customized NPD processes of companies such as Google, ING Bank, or IBM. These companies have adapted their NPD program accordingly: Google Spring (Knapp et al., 2016), PACE by ING, and IBM Enterprise Design Thinking.

As more NPD methodologies emerged, technology began to play an increasingly important role in the innovation process. In their definition of the NPD process, as early as 1995, Brown and Eisenhardt pointed to the role of technology integration in innovation creation. Since then, emerging technologies have played an essential role in the NPD process. Digital transformation and new online tools have revolutionized the innovation creation process. Most notably, the cost of creating innovations has decreased (Chrysosouris et al., 2009; Royston, 2019), making it accessible not solely to large global players. The trend of creating innovations by startups was born, reflecting the democratization of innovation and the lowered barriers to entry that previously required substantial resources: Financial, talented employees, information, and access to customers (Nelson, 2015; Bendickson et al., 2017; Edison, 2016). Simultaneously, new working methods like Lean Startup (Ries, 2011), or Product Development (Blank & Dorf, 2020) have emerged, with their creators sharing the secrets to successful innovation in the technology field.

We are witnessing a similar evolution in forming new methods of applying artificial intelligence (AI) to NPD processes. The definition of AI, according to the Oxford University Press (2023), indicates the potential of AI in creative and cognitive processes: "The capacity of computers or other machines to exhibit or simulate intelligent behavior." A huge shift in the work of NPD teams has come with the proliferation of generative artificial intelligence (GenAI), which enables the generation of text, images, audio, and video without the need for engaging data scientists, who in the past were necessary to use AI in NPD processes. GenAI possibilities fit perfectly into the scope of work of the NPD process, becoming an important part of any research and design (R&D) team.

The new era of AI is not an addition that requires adaptation; AI redefines processes within companies (Walter & Daugherty, 2019); identical changes are taking place in the field of NPD (Cooper & Brem, 2024). Both large and small consulting firms are creating their own AI Innovation Framework: IBM, Deloitte, and the Board of Innovation; this is certainly the beginning of enriching NPD processes with AI.

It is worth noting that AI has been used for many years to create innovations (Jarek & Mazurek, 2019), and of particular note is the area of Industry 4.0 with various AI

technologies to create innovations like the use of digital twins. A highly successful example is the collaboration of global giants Nvidia and BMW in developing the factory of the future using AI. What is different and new is the change in the systematic use of AI.

This chapter aims to explore the use of AI in creating innovation no longer as an occasional and temporary use but the AI application in NPD in a systematic, disciplined, and methodical approach, which addresses two aspects: The use of GenAI to create innovations (innovate with AI) and the application of existing AI technologies to create new products and services (innovate for AI). ESG data platform, the first digital platform in Europe to collect and manage ESG data from different industries and with access to financial institutions to monitor companies' green transformation, was created with the AI regime in the NPD: Innovate with and for AI. On the one hand, GenAI tools enrich the NPD process to analyze sustainable business trends, review existing AI solutions in the ESG domain, extract insights from interviews, generate prototypes, and prepare educational material about each stage of the innovation process for new team members. On the other hand, the whole idea of the ESG tool concept was to use existing AI technologies to develop a platform to collect data according to the taxonomy to manage and execute ESG strategy (e.g., Internet of Things (IoT) sensors, data lakes, cloud computing, machine learning). As a result, existing AI solutions were harnessed so that the platform meets an essential requirement: "One-click ESG report."

Working on an ESG platform using AI in NPD processes accelerated the project, allowed access to hard-to-reach information, and increased the team's efficiency. The ESG platform adopted existing AI solutions and did not require the development and upgrade of any of the AI technologies to result in a new value that key financial institutions use to monitor the ESG performance of listed companies. There are more similar examples of innovation based on adapting existing AI technologies, such as the startup MIM Fertility, where machine learning models are used to treat infertility.

## GENERATIVE AI IN INNOVATION

GenAI with text, image, audio, and video generation capabilities has ushered in a new era of human-machine collaboration by setting a new direction of hybrid work based on collaboration and interaction (Mollick, 2022; Saha et al., 2023; Ye et al., 2023) to achieve a new value and quality of work output. In the proposed theory of "man-computer symbiosis" Licklider pointed to a symbiotic relationship in which humans and machines work together to achieve goals, supporting and complementing each other's strengths. Humans are responsible for creativity, decision-making, and contextual thinking, while computers are responsible for computing power, accuracy, and data analysis (Licklider, 1960, para. 4). In 2004, researchers from MIT Media Laboratory claimed that with appropriate technology-based catalysts, humans can extend cognitive capabilities ten times or more (Roy, 2004). In the case of GenAI, this collaboration goes beyond merely commanding the machine; it involves conversing with the AI, guiding it to provide answers, and correcting its errors through interaction. The new form of collaboration refers to the complementarity of humans and AI, where there is a harnessing of strengths: The unique strengths of both humans (creativity, empathy,



judgment) and machines (speed, accuracy, data processing) to achieve better results than each of them individually (Obrenovic et al., 2024). Recent research on creativity in working with GenAIs indicates a positive aspect translating into increased creativity and a negative aspect resulting in similar outcomes (Doshi & Hauser, 2023), indicating the need to develop new methods and skills for working with GenAI. Another change is the speed and scope of GenAI—one person can perform tasks that previously required many, fundamentally altering the very nature of work. We no longer have to work alone; chat AIs have introduced a new form of human-machine collaboration (Noy & Zhang, 2023; Brynjolfsson et al., 2023; Chen et al., 2023). Finally, GenAI introduced a form of human-machine collaboration due to the “zero-shot” function, discovering the possibilities GenAI was not trained for (Xu et al., 2022; Dang et al., 2022; Sarma et al., 2022).

## PROMPT DESIGN IN NPD

The first principle of creating innovations in the AI era involves redefining past realities and patterns (Ryan, 1994). This is also true for textbooks, especially those on technology. Often, when these books are published, the information they contain is already outdated.

The same applies to acquiring up-to-date knowledge about innovation methods, the NPD process, tools, and the innovation ecosystem in the AI era. Instead of describing reality at the time of publication, the paradigm for creating textbooks is changing. It is becoming more important to ask the right questions to access unique information and create new value. Sourcing knowledge using GenAI and verifying its accuracy is becoming a new skill. Since access to expertise is virtually unlimited and requires minimal effort, the ability to apply this knowledge in practice is essential. Business complexity and uncertainty require proficiency in selecting the right tools depending on the organization’s problems and innovation challenges.

The advantage of using GenAI to gain knowledge about the NPD process is that it can cater to varying levels of expertise. By adequately structuring a question, users can get answers tailored to their needs and level of proficiency in NPD topics. In the age of AI, digital literacy is a new skill involving proficiency in using technological tools for everyday use and solving new problems. Therefore, instead of describing NPD models, the author proposed a series of prompts to quickly gather information from the NPD field (Table 8.1).

The prompts in Table 8.1 are very general; while they may lead to interesting information, making them more detailed is beneficial. Adding context to each prompt can lead to entirely different insights. Possible options:

- **By defining a role**, specifying what role the AI is acting in, or trying to get information for. You can act as Chief Innovation Officer, founder of a startup, Venture Capital (VC) partner or VC analyst, member of a startup, an experienced person in the NPD, or even a Chief Executive Officer (CEO) who wants to learn more about NPD.
- **Specify the goal or task to be accomplished**. The more precise you are, the higher quality answers you will receive. You can ask for a summary, an overview, detailed information, or step-by-step instructions.



**TABLE 8.1** Prompt Design in the NPD

Area	Prompt
NPD strategically	<ul style="list-style-type: none"> <li>• Generate different models for managing the NPD process</li> <li>• Prepare an NPD strategy plan for organization [x] operating in industry [y]</li> <li>• Generate an NPD process model for an organization [operating in a local market/global corporation/family business/...]</li> <li>• Prepare a description of the NPD model for organizations operating in the pharmaceutical, oil and gas, and space industries and show the differences found in these processes</li> </ul>
Methods in NPD processes	<ul style="list-style-type: none"> <li>• Generate 20 models for creating innovation through the NPD process</li> </ul>
NPD—best practice & benchmarks	<ul style="list-style-type: none"> <li>• Generate best practice examples of innovation creation through the NPD process for the industry [x]</li> </ul>
NPD—trends	<ul style="list-style-type: none"> <li>• Generate the latest trends in the NPD area</li> <li>• Generate the latest trends in the NPD process used in Silicon Valley/by startups in Israel, India, South Korea</li> <li>• Generate the latest trends in the industry [x]</li> </ul>
NPD—the most common mistakes	<ul style="list-style-type: none"> <li>• Generate a list of the 30 most common errors that occur in NPD processes</li> </ul>
NPD frameworks	<ul style="list-style-type: none"> <li>• Prepare a list of popular frameworks for creating innovations</li> </ul>
NPD—the most innovative companies	<ul style="list-style-type: none"> <li>• Generate a list of global reports that showcase the most innovative companies. Add links to each report</li> <li>• Develop a list of the world's most innovative companies</li> <li>• Develop a list of the most innovative companies in the industry [x]</li> </ul>
NPD innovation reports	<ul style="list-style-type: none"> <li>• Develop a list of global reports dealing with the topic of innovation and include a link to each report</li> </ul>
NPD startup ecosystem	<ul style="list-style-type: none"> <li>• Prepare a list of the most active ecosystems supporting startups in the world</li> <li>• Prepare a list of the world's most successful accelerator programs</li> </ul>
NPD—governmental support	<ul style="list-style-type: none"> <li>• Compile a list of US government programs for innovation development</li> <li>• Compile a list of government programs for innovation development in the US, Canada, Israel, India, Japan, UK, Spain, France, etc.</li> </ul>
Sustainable NPD	<ul style="list-style-type: none"> <li>• Generate a list of 15 ideas to make the innovations you create more sustainable</li> <li>• Generate a list of principles for the NPD process to support the implementation of the 17 UN Sustainable Goals</li> </ul>

- **Describing the query context:** AI chatbots do not understand the context of the question, so you need to explain the situation to which the query refers. Investing in describing the context pays off in receiving better quality answers. You can add such contexts as preparing an NPD strategy for a company that has never created an innovation, describing a Business Model Canvas for a first-time user, instructions for obtaining VC funding for a startup, etc.
- **Asking for a specific format:** Table, list, points, description.

The more precise the information you add to your query, the more accurate the response you will receive. Of course, it is necessary to verify the information generated by chat AI, check the source, and critically analyze the information received. Generative AI allows you to access information faster, often works more effectively than search engines, and even provides information you might not have otherwise found. However, it is worth noting that AI chatbots will not replace search engines due to their current limitations, such as the possibility of generating false information, known as “hallucinations.” Search engines are more precise in this regard—they will provide links to pages on the searched topic.

### **Application 8.1 Prompt Design in Innovation**

Get inspired by the prompt ideas from Table 8.1 and test the collaboration with the AI chat of your choice. Check several sources to see how well the answers align with best practices.

Use the hints on how to specify and write advanced prompts by expanding them to include role, context, purpose, and task.

- 1 Do you see a difference in the quality of the responses you receive?
- 2 Compare the responses generated by different AI chatbots: chatGPT, Gemini, Copilot, and Perplexity. Which of these tools provides the most valuable content? Which tool is most convenient for you and why?
- 3 Test search engines by asking the same questions you typed into the AI chatbot. Do you see differences? If so, what are they?

## **INNOVATE WITH AI—NPD ENRICHED WITH GENAI**

The ‘Innovate for Everyone’ section presented the evolution of various NPD process methodologies. For the purposes of this chapter, the author will focus on the innovation framework used by consulting companies (Table 8.2). For the chapter and taking into account the students interested in deepening the advanced topics of AI in marketing, the author will focus on innovations created by marketing teams. These could be product or service innovations targeting individual customers as defined by OECD and Eurostat in the Oslo Manual (2018, p. 20): “An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit’s previous products or

processes and that has been made available to potential users (product) or brought into use by the unit (process).” Additionally, when using the word “customer” in this chapter, the author considers any recipient of innovation occurring in the process of delivering a new product or service. This could be a consumer, a business client, a user of the solution, or a purchaser. The NPD process applies to many industries, products or services, where there are different target markets, but the NPD process itself looks similar, so the author recommends using the word ‘customer’ to refer to the end user of the innovation.

**TABLE 8.2** Generative Artificial Intelligence in Innovation Framework

	<i>Vision &amp; Strategy</i>	<i>Exploration &amp; Insights</i>	<i>Ideation &amp; Design</i>	<i>Development</i>	<i>Go-to-market</i>
Goal of each step	Discover more meaningful opportunities Make faster strategic decisions More frequent market scanning	Gain deeper insights Delegate less value-added tasks Work with a wider scope of data	Generate more ideas faster Creative process simulation Going beyond obvious and typical ideas	Quick prototypes for tests with clients	Gain first users Market research Experiments with real clients
Type of activities	Strategic foresight Competitive analysis Strengths, Weaknesses, Opportunities, Threats analysis (SWOT) Political, Economic, Social, Technological, Environmental, Legal analysis (PESTEL)	Survey design Research scenario Analysis Person Empathy Map Customer Journey Social listening insights	Idea generation Concept prioritization Value proposition design Business model innovation Sustainable Innovation	Prototyping Branding Visuals Pitching presentation Video generation Low-code and no-code design	Go-to-market scenarios Growth marketing plan Content generation Copywriting
Universal GenAI tools	chatGPT, Gemini, Copilot, Perplexity.ai, Claude				
Specific GenAI tools	chatDoc Seenapse Rationale AI DisplayR	Synthetic Users Krafftful Akkio Komo.ai	Seenapse Fermat Stormz AI Adobe Firefly, Midjourney Canva	Adobe Firefly, Midjourney Diagram Bubble Looka	Digital First AdCreative Jasper AI Tome Synthesia, Heygen Eleven Labs

The proposed GenAI tools are just a sliver of the available AI tools for creating innovations. Given the rapidly growing field of AI, people working in innovation teams now constantly monitor, learn about, and test new AI tools. Various platforms can come to the rescue by keeping tools up to date and gathering the most popular ones. Examples of such platforms are AI Tool Hunt or Advanced Innovation Tools.

### **Specific Role of AI Chatbots in the NPD Process**

Table 8.2 shows that the entire NPD process, from setting the vision and strategic areas for innovation creation to market implementation, can now be created using GenAI tools which generate text, images, audio, or video. An exciting role is played by AI chatbots (e.g. ChatGPT, Gemini, Copilot), which play a universal role, assisting with various tasks at each stage of the NPD process. This demonstrates the vast capabilities of AI chatbots. The only barrier to their use in the NPD process is prompt design, that is, developing the proper queries and adopting a creative and bold approach to testing and exploring the capabilities of chatbots. This approach, known as “zero-shot,” encourages users to discover the application areas of AI chatbots, as they are not designed for specific solutions like other GenAI tools (Kojima et al., 2022, para. 1). The challenge to using AI chatbots effectively in the NPD process is creating well-designed prompts and knowing different methods to obtain the desired answers because AI chatbots can be asked in many ways. Three approaches will undoubtedly be helpful in the NPD process: “Generated Knowledge Prompting,” “Chain of Thought Prompting,” and “Tree of Thought Prompting” (Wei et al., 2022, para. 2; Wang et al., 2024, introduction section; Yao et al., 2023, p. 2). While there are many other options for creating prompts, these three are a good starting point.

Generated Knowledge Prompting is an option for a chatbot to create a summary of knowledge on a given topic and then generate an answer following a pre-prepared template. Chain of Thought Prompting is a task for AI to break down complex problems into intermediate steps or paths of reasoning before providing a final answer. It is beneficial for tasks that require logical reasoning, problem-solving, or detailed explanations, as it helps the model generate more consistent and logically structured answers. Tree of Thought Prompting is a thought tree method that structures a prompt, encouraging AI to explore multiple branches or perspectives of a problem before providing a final answer. It is helpful for complex analysis, exploring alternative solutions, or addressing multifaceted issues.

In summary, the availability of AI chatbots is a significant convenience. Still, the ability to work effectively with GenAI depends on proficiency in writing prompts, which will directly influence the quality of the answers received. This was mentioned in the section presenting human-machine collaboration. While innovation has become more accessible and common with GenAI, good prompt design will distinguish the best innovators. The learning curve of writing good prompts requires a trial-and-error approach. Otherwise, we won't learn to work effectively with GenAI.

The use of GenAI tools, including AI chatbots, in creating innovations is an emerging topic. We are at the stage of discovering the capabilities of GenAI, particularly AI chatbots. Innovators are currently testing and discovering available features of these tools. One such exciting functionality of AI chatbots is their ability to generate responses for canvases used in the NPD process, such as Empathy Maps, Customer Journeys, Business Models, and

Value Propositions. While the answers received from AI chats need to be validated against reality, the real value lies in reducing the time required to retrieve information, especially from the “I don’t know that I don’t know” key area for innovators. A good prompt for filling in these canvases can provide interesting discoveries and serve as a starting point for exploring areas previously beyond the project team’s awareness.

Another change GenAI brings to innovation creation is reducing time and energy-consuming tasks. Until a year ago, activities such as accessing unique information, quickly analyzing reports, drawing conclusions, reviewing competitors, or analyzing sentiment in product and service reviews either required investment in an innovation team or the need to use external companies. Both approaches involved additional time and a larger budget. Today, these barriers have been eliminated. The critical change is the new ability to work seamlessly in human-machine collaboration, create effective prompts, and be determined to reach reliable information.

### **Application 8.2 AI Chats in the NPD Process**

- 1 Test AI chatbots in the NPD process by asking them to generate responses for selected steps in the NPD process.
- 2 Try to fill in different canvases (Empathy Map Customer Journey, Value Proposition, Business Model) using AI chatbots for use cases of your choice. You need to provide the persona, their context of action, and the problem they face.

### **Beyond Information Bubble**

Innovating with AI provides another significant advantage in innovation design—getting out of the information bubble. An example is the use of trend reports in the design process. If innovation teams from different companies rely on the same trend reports, it is unsurprising that similar innovations are launched around the same time. This is due to the teams’ professionalism, resulting in similar ideas and time-to-market for innovations. GenAI offers an opportunity to escape this information bubble, discover niche audiences, search scientific articles, and trace innovations not only from the most advanced markets like the US, UK, and Japan but also from Africa or Asia. Hence, GenAI is a set of AI tools for designing innovations and an opportunity to discover niches and test solutions on large target groups. Given the still-low cost of access to AI tools, usually ranging from \$10–20 per month per user, this change could lead to a new era of innovation.

## **INNOVATING FOR AI—AI APPLICATION FOR INNOVATION**

A new area of activity for NPD teams is rediscovering existing products, services or processes using AI. Instead of streamlining and improving AI, NPD teams focus their attention on designing new solutions using ready-to-use AI technologies such as computer vision,

natural language processing (NLP), generative AI, optimization, sensory solutions, voice simulation, autonomous vehicles, predictions, recommendations, IoT, fraud detection, virtual reality, and the metaverse. Other solutions, such as automation and robotization, integrate well with other supportive technologies like cloud, blockchain, or computation. NPD teams face a new challenge of designing new products, services, and processes enriched with AI components that will provide unique value. A new product, service, or process can be combined from several AI technologies developed by different suppliers or in-house AI and data teams. The challenge today is designing an end-to-end process to achieve the synergy of these solutions, necessitating a new NPD method to innovate for AI (Jarek, 2023a, 2023b).

The Innovating for AI approach includes emerging topics like AI ethics, data security, and legal issues. Although the regulation related to AI has yet to be in force, available proposals for AI legislation in the US, Canada, and the European Union offer guidance on what to pay attention to. However, ethical issues, intellectual property, data collection and storage challenges are entirely new areas that NPD teams must address individually. The reputational issues of an organization that brings AI innovations to the market are also significant (Jarek, 2023a, 2023b). Despite these new challenges, creating innovations to apply AI technologies is a forward-looking direction, generating value for the organization and its users. Table 8.3 shows the benefits associated with the application of AI.

**TABLE 8.3** Innovate for AI—Added Value by AI

<i>Areas of added value by AI</i>	<i>Examples</i>
Accelerate tasks—process data and combine knowledge	Introducing new customer services by detecting potential clients' problems through email or call analysis
Automate—reduce manual work or cognitive engagement	ESG data monitoring and reporting are delivered at one click instead of 3–10 months of manual report preparation
Predict—monitor data to predict potential outcomes	Adjusting the best sun protection filter according to weather conditions and sun exposure
Recommend—support in the decision-making process	Recommendation algorithm for presenting similar or complementary products
Enrich—deliver more value than expected	Creating new products using sentiment analysis in social media
Engage—create a personalized experience	Adjusting job offers to fit candidates' values and preferred ways of working
Create—generate text, videos, visuals	Generate personalized commercials adjusted to niche end users
Extract—generate summaries	Preparing your news feed
Sustainability—decreased business negative effect	More sustainable innovation through greater awareness of its environmental and social impact

NPD Process Enriched with AI

NPD projects to create new solutions using various AI technologies differ from the classic model. They have been expanded to include two additional modules: AI Trust Analysis and AI Continuous Journey. Additionally, the existing stages have been enriched with new activities to address the specific requirements of the AI design process (Table 8.4). The NPD process enriched with AI involves several additional tasks. Here’s why these tasks are essential and what they bring to the NPD process:

- 1 AI vision:** Projects exploring new applications of AI differ from standard NPD processes in that they do not require the creation of in-depth analyses. They are so novel that the challenge itself, generally described as “AI in Legal Department in a retail bank,” “AI in ESG reporting,” or “AI for creating a 4-day working week,” serves as the vision for discovering insights into the next step of the NPD process. For typical projects (outside of AI), the vision needs to be firmly grounded in strategy, foresight analysis, or existing business problems.
- 2 Available AI technologies:** The process of creating innovations for AI involves searching for applications of developed technologies rather than creating new AI technologies. This is an example of how, with off-the-shelf AI components, you can put together a new process enriched with ready-to-use AI technologies. The challenge, of course, is to create a prototype and ensure that the entire process works as intended. The innovative AI process aims not to develop AI technologies but to leverage existing ones.
- 3 Designing AI for both participants (client and operator):** This is new because it requires different functions and tasks than traditional innovation projects. This area requires additional work for the team, so it must be highlighted as a separate task in the process.

TABLE 8.4 NPD Process Enriched with AI

Vision & Strategy	New vision of how to harness AI New opportunities are driven by adding AI
Exploration & Insights	Exploring areas for AI application
Ideation & Design	Available AI solutions on the market Designing for both users: client and operator AI technologies selection Type of data description
AI Trust Analysis	Ethical analysis Legal analysis Data security Reputational analysis of the company
Development	AI User Experience Design AI Sustainable Innovation
Go-to-market	AI project metrics
AI continuous journey	AI model update More innovations based on new insights

- 4 **Mapping and describing the data needed:** Designing for AI requires a thorough analysis of the data necessary to make the innovation work. It's also essential to determine if the data is available to the organization, needs to be collected, or must be sourced externally.
- 5 **AI User Experience:** This is quite an interesting stage because, in addition to creating a new AI-enriched solution, it involves designing the AI innovation so that a user who has not dealt with AI before knows how to use the solution. It is also essential that users should be aware that they are using AI, have the option to opt out of the AI function, and can use an alternative solution that does not include AI. This is an additional requirement that companies are testing in designing AI innovations to build trust in AI among users from the beginning.
- 6 **AI project metrics:** Defining AI project metrics before launch allows you to assess the solution's effectiveness. Unlike typical NPD processes, this step requires developing separate metrics for the AI model and business metrics. The latter is typical of Innovation Accounting.
- 7 **AI Continuous Journey:** Developing AI innovations is just the beginning. It's essential to periodically verify the models' correctness after the launch of the AI project. Monitoring new users and their interactions with the solution can affect the accuracy of the AI models.

## TRUSTWORTHY AI

Trustworthy artificial intelligence is based on fundamental principles, including beneficence, non-harm, autonomy, fairness, and explainability. These principles guide the development of artificial intelligence systems that are beneficial to society, avoid harm, respect user autonomy, are fair, and whose operation can be clearly explained to stakeholders (Thiebes et al., 2021; Kaur et al., 2022). These attributes are essential to ensure AI systems' safe and effective operation. AI Trust Analysis is an entirely new phase in AI innovation design. The starting point is to create trusted AI-powered innovations, so it is necessary to develop solutions that are:

- **Transparent**—the ability to show the data and how the AI system generates solutions.
- **Explainable**—developed AI systems should be able to explain how conclusions or predictions are made.
- **Reliable and fair**—the AI system must be designed to avoid bias and be inclusive.
- **Robust**—the AI system should perform effectively under various conditions, even with extreme data.
- **Ensure privacy**—ensuring the security and privacy of personal data is a top priority.

## Ethical Analysis

Ethical analysis is carried out after the ideation and design stage to maximize user value and ensure ethical considerations do not hinder the creativity of design teams. Once such a



solution is prepared, an interdisciplinary team, including an AI ethicist, sociologist, psychologist, and members of the design and business teams, conducts an in-depth ethical analysis of the developed solution. This analysis uses various tools and typically follows these stages:

- **Safeguarding against adverse effects**, which involves eliminating discrimination, misinformation, exploitation, increased inequality, dependency, and physical, mental, or emotional harm.
- **Verification of several levels of stakeholders** who may be affected by the AI-based solution: First Level—the group for whom the solution is designed, including the AI user and operator; Second Level—stakeholders beyond the first group who may encounter the AI solution; Third Level—unintended and unplanned groups who may interact with the AI solution in the future.
- **Ethical Hacking** involves creating worst-case scenarios for the designed AI solution and hacking as many potential problems as possible. The goal is to develop an action plan to address and eliminate these ethical issues.
- **Neutralizing Harmful Functions** focuses on analyzing the effects of various AI functionalities and capturing any areas where AI may be harmful.
- Analyzing the **power of influence in the AI ecosystem** involves examining the relationships of all stakeholders involved in the AI innovation ecosystem and developing a plan to neutralize negative effects or eliminate undesirable relationships.

Ethical analysis requires creating various negative scenarios and predicting future negative consequences. This marks a massive shift in the innovation design process, as this stage was previously analyzed only for the first group of stakeholders. Such an in-depth ethical analysis allows us to consider hypothetical negative consequences, build awareness of the risks posed by AI, and evaluate how much AI is needed in an innovation to achieve strategic goals. This approach adds tremendous value to the NPD process because, in the past, such extensive analyses were not conducted and were not consulted with as many experts from different fields as they are today.

## Legal Analysis

At the time of writing this chapter, only the European Union has approved legislation governing the field of AI (the so-called EU AI Act); its entry into force will not happen overnight. At the same time, legislation around AI is being developed in other countries like the US and Canada.

Every AI project requires cooperation with lawyers because of the many legal issues that arise from AI. These issues include the privacy rights of individuals, data rights, General Data Protection Regulation (GDPR), compliance, copyrights, patents, liability of the AI solution manufacturer and user, and the development of regulations for AI innovations.

## Data Security

Once the ethical and legal analysis is done, it is crucial to look at the areas of data collection and develop a plan to guarantee its security. These activities are performed with the help

of data security and cybersecurity experts. They recommend adhering to the organization's existing policies and creating new ones when new contexts arise or new data is acquired.

## Reputational Analysis of the Company

Completing the previous three steps—ethical, legal, and data security analysis—concludes with the final analysis on determining the negative impact of AI innovations on the company's reputation. It is crucial to align this analysis with the vision and defined values of the organization, as well as the company's strategy. Strategies focused on green transformation and creating sustainable organizations are increasingly influential. AI solutions are often curtailed or even not implemented if the company's reputation could suffer. Communicating the reasons for such decisions to the project team and the broader organization is essential. Effective communication helps build a culture of creating AI innovations and reinforces the company's principles. On the other hand, open communication helps to keep those working on AI innovations motivated since these types of decisions occur at the final stage of the NPD process after the effort has been invested in developing the AI innovation.

## SKILLS FOR AI NPD

GenAI introduces a new way of working and a new dimension of human-machine collaboration. An NPD team emphasizes future competencies highlighted in the World Economic Forum report, focusing on skills specific to working closely with AI and creating AI innovations based on available technologies. Table 8.5 presents a set of essential skills for innovation teams, which fall into two categories: Technology-related skills and soft skills. In the case of the former, two new areas have emerged that were not mentioned in the 2023 reports on future competencies: Prompt design and AI-augmented work. For soft skills, two crucial abilities for the success of AI projects have come to the forefront: Imagination and flexibility. Designing AI solutions requires an entirely different approach than current solutions, often involving breaking patterns and sometimes even testing illogical solutions. Without imagination and flexibility, it will be tough for teams designing AI innovations to break away from the status quo.

**TABLE 8.5** Competencies of the Future Needed in NPD Teams

Technical Skills	General Technical Knowledge	People working in innovation should be well acquainted with technologies, including AI, to connect user, business, and environmental needs with the innovations created. Technical knowledge does not mean being a competent engineer in a selected technology; instead, it involves understanding the capabilities and limitations of various technologies to communicate and brief engineering teams effectively. Additionally, staying updated with new developments in the field is essential.
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(Continued)

TABLE 8.5 (Continued)

	Prompt-design	Working in innovation with AI requires proficiency in creating effective prompts for the various AI tools used in the NPD process. The results' quality largely depends on how well the questions are constructed and on understanding the best tactics for conducting a conversation with GenAI.
	Low-code and No-code Skills	The ability to use and leverage AI tools that require little or no coding knowledge is essential. In an NPD process enriched with AI, innovation teams utilize these tools throughout the entire process, so each team member should be able to use various low- and no-code tools practically.
Collaboration Skills	AI-augmented Work	The ability to work with AI tools involves understanding them and knowing when and how to use them to achieve the best results. It requires awareness of which tasks AI can perform most effectively and which tasks are better suited for human experts. The ability to distinguish and define the scope of tasks performed by team members and tasks performed with AI tools.
	Collaboration	Collaboration has always been an essential skill in innovation, but in the era of AI, the scope of engaged experts and stakeholders is even greater. This means gathering more information and building and sustaining more relationships with people from different fields. AI has increased the number of interactions and stakeholders, leading to a more complex and dynamic working environment.
Soft Skills	Critical Thinking	The ability to verify the information generated by AI and select a key AI toolkit for innovation work are also important. Critical thinking is essential for analyzing ethical, legal, data security, and reputational risks, allowing teams to anticipate and address potential consequences.
	Curiosity	Proactively seeking inspiration, new topics, and areas for transformation using AI. Curiosity involves defining new, unexplored, and sometimes not-so-obvious areas in the design process. Curiosity is also crucial to finding new opportunities, especially in areas where today's solutions are not cost-effective or lack business potential. In the world of AI innovation, the opposite may be true.
	Creativity	Creativity has always been a core competency in innovation. Regarding AI chatbots, it means discovering their new capabilities and testing new applications. The same applies to creating new AI-powered processes (innovate for AI)—we are beginning the journey of finding new AI applications. Creativity is vital for configuring various AI technologies into a cohesive process.
	Flexibility	Proficiency in switching between different modes of teamwork, leading diverse topics from various areas, and being willing to change the direction of ongoing projects based on new information is essential. Flexibility is critical in risk analysis for AI innovations, especially when risks are identified, and alternatives must be sought to eliminate those risks.

Empathy	The ability to understand the emotions and needs of different audiences is important. Empathy is essential in AI design for users who have never used AI solutions. It helps develop trustworthy AI by anticipating and addressing potential negative consequences for various audiences.
Imagination	AI design is about creating new realities where simply mapping today's processes and adding AI isn't sufficient. Imagination helps redefine the rules of the game and is essential for ethical analysis, as it enables the prediction of future consequences for distant and non-obvious stakeholder groups.
Life-tech Balance	AI has made work more dynamic. On one hand, it is helpful and enables tasks that were impossible a few years ago. On the other hand, AI intensifies work, making collaboration in an AI-augmented environment demanding. This necessitates periods of regeneration and rest from the virtual world.

Note: Working with GenAI tools to develop NPD requires a new set of technical, collaboration, and soft skills. Adapted from: World Economic Forum (2023, 2024).

## OPPORTUNITIES

The integration of AI in the NPD process has introduced transformative opportunities, enabling organizations to innovate efficiently while addressing the complexities of today's uncertain business landscape. At the beginning of this chapter, the author presented the evolution of various methods of creating innovation, with each change leading to new possibilities for innovation. Similarly, this is reflected in both approaches: Innovating for AI and with AI. The use of AI in the NPD process is gaining momentum, and we are still in the learning phase of systematically leveraging generative AI in innovation. There are many new possibilities at this point, and as GenAI tools become more widely adopted, we will continue to discover new opportunities.

### Increased Efficiency of NPD Processes

AI tools have accelerated innovation efforts in the NPD process. Projects that took several weeks can now be completed in just a few. This results in cost reductions and the potential for more innovation projects. The reduced time required for innovation also creates opportunities for companies that have not launched innovation programs due to limited resources.

### Innovation to Operate in an Uncertain World

In recent years, businesses have operated in a highly dynamic environment marked by change and uncertainty, driven by global factors such as Russia's attack on Ukraine, war in the Middle East, shifts in geopolitical forces, inflation in many countries, and the effects of

the COVID-19 pandemic. The uncertainty and complexity of the business landscape are growing. Innovation can be a powerful tool for addressing these new challenges and, over time, can become an integral part of business operations due to lowered barriers to entry through NPD enriched with AI.

## **Developing Skills of the Future in Practice**

Working on a project to create new AI applications using the GenAI tool presents a unique opportunity to learn a new model for working on innovation and train employees to use AI in their daily work. Innovation projects are a great way to build an AI-driven organizational culture, providing a safe environment to learn and test AI tools in practice. The company creates an environment for exploring and learning about AI and its applications by creating virtual teams and tackling various organizational challenges. Participating in developing trustworthy AI raises employee awareness of AI's ethical and legal aspects. Collaborating with data and cybersecurity experts also reinforces a sense of responsibility for the data collected and managed.

## **New Applications of AI**

We are facing a new phase of AI innovation—the search for new AI applications. We are only limited by our imagination as to how we can reinvent the existing process. Currently, we have access to many AI technologies, including computer vision, NLP, generative AI, optimization, sensory solutions, voice simulation, autonomous vehicles, predictions, recommendations, IoT, fraud detection, virtual reality, and the metaverse. Creating innovations using these technologies opens a vast range of possibilities. A key role for innovation teams will be to explore new applications of AI.

## **More Social and Sustainable Innovations**

AI saves time and reduces the number of days needed in the NPD process, creating opportunities to work on more projects. As a result, more innovative projects can be delivered for organizational or external purposes. Creating more sustainable businesses or social innovation can be the future direction for innovation.

## **Democratization of Innovation**

Democratizing access to knowledge on creating innovations will unleash creativity and encourage more people to develop innovations. This is particularly beneficial because it enables innovation to emerge in areas previously lacking the resources to create it, such as public administration or among excluded groups. Lowering the barrier to entry in the innovation creation process can generate new ideas and solutions first for these new groups and then for the market.

Access to AI tools and knowledge of how to create innovations means that innovation will become accessible to everyone—not only innovation teams but every employee. This also applies to organizations that have not yet engaged in innovation. First, signs are already

visible among nongovernmental organizations (NGOs) and administration employees increasingly embracing innovation. So, thanks to AI, we can enter a world where everyone has the potential to innovate!

The democratization of innovation can benefit developing countries, mainly rural areas with no access to knowledge or experts. For example, in India, access to AI chatbots has translated into creating books for farmers and rural residents, explaining how to use AI chatbots in performing daily tasks at work and in their personal lives (Ingram, 2023).

## **Fewer Failed Innovations**

The democratization of innovation can lower the percentage of failed innovations. With greater access to knowledge on creating innovations and a wide range of creative prototyping tools, the number of experiments can increase, and the quality of final solutions can improve. Of course, everything depends on the quality of the tests and the accuracy of their execution, which are today's barriers.

## **More Motivation to Work on Innovations by Eliminating Tedious Tasks**

With the advantage of a vast number of AI tools supporting the innovation process, AI can now perform many tedious tasks. This shift changes the role of people working on innovations, increasing the importance of creative thinking and team discussions about the results obtained instead of dividing labor for repetitive tasks. For those new to innovation teams, the volume of work and tasks can come as a surprise. AI shortens work time, allowing more focus on strategic issues rather than operational ones.

## **New Dimension of Mentoring Programs in Innovation**

Accelerator or incubation programs are excellent ways to develop innovation creation skills. However, it is a heavy burden for innovation mentors to work with people taking their first steps in innovation. AI chatbots come to the rescue by generating descriptions of various innovation creation methods (e.g., Empathy Map, Customer Journey, Business Model Canvas, Value Proposition) and the option to create instructions, checklists, or task lists for each stage. This allows mentors to focus on imparting unique knowledge about the NPD process and addressing exceptions that occur at different stages rather than spending time teaching the basics.

### **Application 8.3 GenAI Tools in Practice**

- 1 Test the GenAI tools included in Table 8.2.
- 2 Which of these tools will you add to your workbench, and which will you discard?
- 3 Use idea-generation tools (Komo.ai, Seenapse, Fermat, Stormz AI) and then use AI chatbots to generate similar ideas. Which tools provided the most exciting suggestions?

## **NAVIGATING AI-DRIVEN INNOVATION: CHALLENGES IN NEW PRODUCT DEVELOPMENT**

The emergence of AI within NPD presents a transformative shift in how organizations innovate. As AI democratizes access to NPD, it lowers entry barriers, enabling more individuals and organizations to engage in innovation. However, this evolution brings its own set of challenges and considerations. As the field continues to evolve, NPD practitioners must adapt quickly, developing competencies for AI-assisted and AI-created innovations while navigating the new complex landscape of the NPD process enriched with AI.

### **Acquisition of New Competencies**

AI makes NPD more democratic and accessible to anyone with internet access and a paid subscription for selected AI tools. AI technologies are available at lower costs than in the past, and with easy access to GenAI tools, nearly everyone can innovate. For those unfamiliar with the NPD process, tools, and methods, AI chatbots can provide the necessary knowledge in seconds. However, having access to GenAI tools does not guarantee equal benefits for everyone—it depends on new soft skills; in particular, effective communication with machines and fluency in AI-augmented work environments, including proficiency with low-code and no-code tools. Soft skills will be highly valued in AI-driven NPD processes. Without imagination, AI innovations will merely replicate existing solutions. AI solutions will lack the necessary ethical perspective without empathy and critical thinking. Finally, working in a more advanced AI-augmented world, maintaining a tech-life balance will be crucial for mental health. While AI offers tremendous opportunities, developing new competencies is essential to achieving the expected results.

### **More Competition in Innovation**

Democratizing access to innovation creation and lowering the threshold of entry can lead to increased competition in the field of innovation. Access to AI tools can flood the market with innovations, making it harder to reach the final audience and potentially overwhelming them with numerous innovation messages. On the other hand, relying only on knowledge from AI chatbots may lower the quality of innovations and thus discourage companies from investing in new solutions.

### **New Challenges in Innovation Team Management**

The dynamic pace of work on innovations in the era of AI will require a new approach to organizing work and ensuring the well-being of entire teams to skillfully regenerate human potential before initializing new projects. The challenge is to manage team energy because working on innovations is a significant intellectual effort that requires mental recovery. Moreover, NPD enriched with AI enables the realization of more projects in less time, which requires proper management of the number of projects, building innovation teams, and using various experts within the open innovation ecosystem. Lack of good management can lead to chaos, inefficiency, and potential mental health issues, including employee burnout.

## Complex Ethical, Legal, and Data Protection Issues

The big change in NPD processes enriched with AI involves addressing ethical, legal, and data security issues. The NPD process has been expanded to include an additional stage dedicated to analyzing potential negative impacts and developing alternatives. This work is very intensive and intellectually demanding, which can lower the standards and quality of the work and even compromise user interests. Some countries are already setting up governmental teams to evaluate the ethicality of AI innovations to oversee the elimination of unfavorable AI solutions. However, today's NPD process still allows for significant arbitrariness in the outcome of ethical, legal, and data protection issues. The challenge is for the industry to develop best practice standards in these areas so that organizations follow accepted benchmarks and avoid reinventing the wheel.

## Dangers of Unethical Use of AI for Innovation

We live in an era of innovations whose sole purpose is to change the world for the better, improve lives, offer more convenience to customers, or create more sustainable solutions using AI. But what if democratic access to innovations is used to develop innovations that negatively impact people and the world? It is a controversial but equally possible scenario. In May 2024, the *Times of India* reported on China's deliberate efforts to conduct "cognitive warfare" using technology (para. 2). While hacking activities and cybersecurity breaches are not new, the prospect of using technology for harmful purposes is alarming. Such announcements may prompt governments worldwide to launch innovation programs aimed at neutralizing these threats and securing societies from the misuse of technology. This is a likely direction for new AI innovation incubation and acceleration programs to prevent malicious actions.

## Reduction of Jobs in Innovation

Finally, we must consider innovation experts' role in the era of democratized innovation thanks to AI. On one hand, AI tools enormously streamline innovation work and reduce the time needed for projects. On the other hand, we are witnessing the dynamic development of AI, which could soon replace innovators just like it is affecting other creative industries, such as journalism, directing, and screenwriting. Another threat to innovation practitioners comes from people without experience who may start working in this field simply because they have access to AI tools. Therefore, this is the moment for innovators to consider adding new competencies and proactively seek new opportunities. If anyone is equipped to navigate this change, it's the innovators!

## KEY INSIGHTS FOR NEW PRODUCT DEVELOPMENT PRACTITIONERS

The use of AI in NPD processes is not yet widespread, and, as in other areas of business, AI is slowly beginning to make its presence felt. This is the last call for practitioners to take an interest in the new direction and acquire the necessary skills. Given the enormity of the changes since November 2022, it's wise to stagger the implementation of an AI-enriched



process into several stages. First, start working with AI chatbots and actively integrate them into current NPD processes. This provides an opportunity to learn prompt design and develop new habits in an AI-augmented work environment. The second step is to start using GenAI tools for innovation work. The final, most advanced stage is to begin creating innovations for AI. The NPD process is expanded here with additional steps and tasks tailored to AI's unique characteristics. It also involves collaborating with an expanded team, including AI engineers, AI ethicists, AI lawyers, and cybersecurity experts.

It is crucial to start working with AI as soon as possible, as this is the moment to expand and develop new competencies. For heads of innovation teams, the new challenge is to manage the innovation team in an AI-augmented work model, handle an entirely different portfolio of projects, and build a culture of innovation in the age of AI. For those interested in creating social innovation, there will soon be many new opportunities to apply AI in various areas: cities, for excluded groups, in social innovation, or in preventing and neutralizing harmful application of AI by hostile organizations.

## CHAPTER SUMMARY

AI in innovation is a huge help. Well-used AI chatbots like ChatGPT, Gemini, Copilot, or Perplexity can transform the dimension of work in the NPD process. In addition, dedicated AI tools reduce time, provide unique value, and sometimes surpass human creativity. These dimensions make creating innovation with AI a whole new chapter in the world of NPD. On the other hand, the availability and sophistication of various AI technologies have ushered in a new era of exploring their applications, leading to the redefinition of current processes. These activities require tremendous imagination to challenge existing setups and propose new rules and solutions.

Finally, an important question remains: Why do we want to use AI in innovation? Is it because we want to do cool things, because there is hype around AI, and everyone is talking about it, or because we just want to add AI to everything? None of these three reasons are sufficient to launch a venture. AI is a complex technology that generates huge costs and consumes much energy to maintain servers with data and generate results. Therefore, AI projects must be approached cautiously and with awareness that not everything has to be AI-driven. Sometimes automation is sufficient, but the answer to this question should be provided by an NPD team that can operate efficiently in an AI-augmented work environment.

## KEY TERMS

- **Generative AI in Innovation:** The use of AI technologies that create new content—such as images, text, audio, video, or designs—to enhance product and process innovation, driving creative and efficient solutions in business.
- **Innovate for AI:** Developing new products or services to address new problems, needs, and opportunities by applying existing AI technologies.

- **Innovate with AI:** Leveraging artificial intelligence, mainly generative AI tools, to enhance business innovation, improve decision-making, and streamline processes for competitive advantage.
- **New Product Development:** Bringing a new product or service to market involves idea generation, research, design, prototyping, testing, and launching to meet customer needs and drive business growth.
- **Sustainable Innovation:** New solutions that promote long-term environmental, social, and economic benefits align with responsible business practices and sustainable growth.
- **Trustworthy Innovation AI:** AI-driven innovation practices that prioritize ethical standards, transparency, and accountability to build user (client, employee, or third party) trust and ensure responsible use.

## DISCUSSION QUESTIONS

- 1 What role does leadership play in fostering a culture of ethical innovation within an organization?
- 2 How can ethical innovations contribute to long-term business sustainability and success? What role does environmental sustainability play in ethical innovation, and how can it be incorporated into the design process?
- 3 How can innovations be designed to positively impact society while avoiding unintended negative consequences? In what ways can businesses involve stakeholders and communities in the innovation process to ensure ethical outcomes?
- 4 What new skills are essential for business leaders to effectively manage and implement Generative AI technologies? How should leaders approach upskilling or reskilling in order to keep the staff competitive in a landscape increasingly influenced by Generative AI? How might Generative AI reshape traditional business roles, and what skills will be most in demand in this new environment?
- 5 How do you define ethical innovation in the context of business and technology? How would you ensure that ethical considerations are integrated into the innovation process at every level of a company?
- 6 How can companies build and maintain consumer trust when launching new technologies or innovations? What measures can be taken to ensure transparency and accountability in the development and deployment of new innovations?
- 7 How should companies navigate the regulatory landscape when designing ethical innovations? What challenges do businesses face in complying with both local and global ethical standards, and how can they overcome them?
- 8 How can businesses balance the pursuit of profit with the need to design ethical and trustworthy innovations?

**TABLE 8.6** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Advanced Innovation KI Tools</b>	<a href="http://www.advanced-innovation.io/ki-tools">www.advanced-innovation.io/ki-tools</a>	This platform offers a comprehensive database of AI tools categorized by function (e.g., productivity, image editing, generative art) to support various professional needs and facilitate easier access to AI technology solutions.
<b>AI Tool Hunt</b>	<a href="http://www.aitoolhunt.com/">www.aitoolhunt.com/</a>	AIToolHunt is an extensive AI tool aggregator that helps users discover and compare AI-powered applications across diverse categories, enabling informed choices for personal and professional use.
<b>BIK ESG Platform</b>	<a href="https://media.bik.pl/informacje-prasowe/827583/platforma-esg-bik-dane-w-sluzbie-zrownowazonych-finansow">https://media.bik.pl/informacje-prasowe/827583/platforma-esg-bik-dane-w-sluzbie-zrownowazonych-finansow</a>	BIK's ESG platform offers data solutions for sustainable finance, supporting transparency in ESG performance.
<b>Board of Innovation—AI-Powered Creativity and Design</b>	<a href="http://www.boardofinnovation.com/ai-powered-innovation-creativity-design/">www.boardofinnovation.com/ai-powered-innovation-creativity-design/</a>	This initiative explores how AI can enhance innovation, creativity, and design processes in companies, offering insights into integrating AI effectively for creative growth.
<b>ChatGPT</b>	<a href="https://chat.openai.com/">https://chat.openai.com/</a>	A versatile AI chatbot by OpenAI designed for generating human-like responses, aiding with information, brainstorming, drafting, and much more in conversational format.
<b>DeepL</b>	<a href="http://www.deepl.com/">www.deepl.com/</a>	An advanced machine translation tool known for its accuracy in translating text between multiple languages, especially valued for preserving context and nuance.
<b>Deloitte—ESG Reporting Software</b>	<a href="http://www2.deloitte.com/us/en/insights/industry/technology/technology-media-and-telecom-predictions/2024/esg-reporting-software-growth-prediction.html">www2.deloitte.com/us/en/insights/industry/technology/technology-media-and-telecom-predictions/2024/esg-reporting-software-growth-prediction.html</a>	Deloitte forecasts a surge in ESG reporting software demand, driven by regulatory changes and corporate responsibility trends, as businesses prioritize sustainable practices.
<b>Design Council—Systemic Design Framework</b>	<a href="http://www.designcouncil.org.uk/our-resources/systemic-design-framework/">www.designcouncil.org.uk/our-resources/systemic-design-framework/</a>	This framework by the Design Council aids in addressing complex challenges by integrating systems thinking, fostering sustainable and inclusive design approaches.

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Gartner Hype Cycle 2023—AI Trends</b>	<a href="https://www.gartner.com/en/articles/what-s-new-in-artificial-intelligence-from-the-2023-gartner-hype-cycle">www.gartner.com/en/articles/what-s-new-in-artificial-intelligence-from-the-2023-gartner-hype-cycle</a>	Gartner's 2023 Hype Cycle reveals AI advancements, spotlighting transformative applications across industries.
<b>Gates Notes—Age of AI</b>	<a href="https://www.gatesnotes.com/The-Age-of-AI-Has-Begun">www.gatesnotes.com/The-Age-of-AI-Has-Begun</a>	Bill Gates explores AI's transformative potential across healthcare, education, and productivity, emphasizing its future impact on global challenges.
<b>Google Gemini</b>	<a href="https://gemini.google.com/app">https://gemini.google.com/app</a>	An AI project by Google aiming to integrate large-scale language models with multimodal capabilities, enhancing responses with richer, more interactive outputs across text, image, and beyond.
<b>Google Gemini Updates</b>	<a href="https://gemini.google.com/updates">https://gemini.google.com/updates</a>	Google's Gemini provides insights into Google AI's latest advancements and updates, highlighting breakthroughs across various fields.
<b>Grammarly</b>	<a href="https://app.grammarly.com/">https://app.grammarly.com/</a>	A writing assistant that uses AI to check grammar, style, and tone, helping users improve the clarity and effectiveness of their written communication.
<b>IBM Artificial Intelligence</b>	<a href="https://www.ibm.com/artificial-intelligence">www.ibm.com/artificial-intelligence</a>	IBM's platform highlights AI applications and tools, focusing on how AI improves business processes, customer experiences, and research.
<b>IBM Design Thinking</b>	<a href="https://www.ibm.com/design/approach/design-thinking/">www.ibm.com/design/approach/design-thinking/</a>	This framework combines agile methodologies with a user-centered approach, promoting innovative and collaborative problem-solving.
<b>ING AI Chatbot</b>	<a href="https://media.ing.pl/informacje-prasowe/926/pr/385753/czatbot-wykorzystujacy-sztuczna-inteligencje-odpowie-na-pytania-klienta">https://media.ing.pl/informacje-prasowe/926/pr/385753/czatbot-wykorzystujacy-sztuczna-inteligencje-odpowie-na-pytania-klienta</a>	ING introduces an AI-powered chatbot that enhances customer service by providing automated, accurate responses.
<b>ING—PACE</b>	<a href="https://www.ing.com/Newsroom/News/Setting-the-PACE.htm">www.ing.com/Newsroom/News/Setting-the-PACE.htm</a>	ING's PACE methodology offers a structured approach to innovation, emphasizing customer-centric, iterative development.

(Continued)

TABLE 8.6 (Continued)

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>ING PACE—Structured Innovation Process</b>	<a href="https://developer.ing.com/openbanking/inspiration/news/pace-ings-structured-innovation-process">https://developer.ing.com/openbanking/inspiration/news/pace-ings-structured-innovation-process</a>	ING's PACE framework supports structured innovation, guiding teams through rapid ideation, testing, and scaling solutions.
<b>Licklider's Theory Man-Computer Symbiosis</b>	<a href="https://groups.csail.mit.edu/medg/people/psz/Licklider.html">https://groups.csail.mit.edu/medg/people/psz/Licklider.html</a>	J.C.R. Licklider, a pioneer in human-computer interaction, emphasizing his influence on personal computing and AI's future.
<b>Microsoft Copilot for 365</b>	<a href="https://techcommunity.microsoft.com/t5/copilot-for-microsoft-365/bg-p/Microsoft365CopilotBlog">https://techcommunity.microsoft.com/t5/copilot-for-microsoft-365/bg-p/Microsoft365CopilotBlog</a>	Updates and guides for using Microsoft's Copilot in 365, focusing on productivity enhancement through AI tools.
<b>MIM Fertility AI</b>	<a href="http://www.mimfertility.ai/">www.mimfertility.ai/</a>	MIM Fertility leverages AI to improve fertility treatments, optimizing clinical insights and patient outcomes.
<b>NNGroup—AI Paradigms</b>	<a href="http://www.nngroup.com/articles/ai-paradigm/">www.nngroup.com/articles/ai-paradigm/</a>	This article explores the evolving paradigms in AI, highlighting usability and design implications for AI in user interfaces.
<b>NVIDIA x BMW—Factory of the Future</b>	<a href="https://blogs.nvidia.com/blog/nvidia-bmw-factory-future/">https://blogs.nvidia.com/blog/nvidia-bmw-factory-future/</a>	NVIDIA collaborates with BMW to design a futuristic, AI-powered manufacturing facility that emphasizes automation, efficiency, and precision, setting new standards for industry 4.0.
<b>OECD—AI and the Future of Skills (Vol. 2)</b>	<a href="http://www.oecd.org/en/publications/ai-and-the-future-of-skills-volume-2_a9fe53cb-en/full-report.html">www.oecd.org/en/publications/ai-and-the-future-of-skills-volume-2_a9fe53cb-en/full-report.html</a>	This report delves into AI's impact on future workforce skills, detailing challenges and opportunities in adapting education and labor policies.
<b>OECD AI Skills Report</b>	<a href="http://www.oecd.org/content/dam/oecd/en/publications/reports/2023/11/ai-and-the-future-of-skills-volume-2_a3986583/a9fe53cb-en.pdf">www.oecd.org/content/dam/oecd/en/publications/reports/2023/11/ai-and-the-future-of-skills-volume-2_a3986583/a9fe53cb-en.pdf</a>	Explores AI's influence on skills development, workforce adaptation, and policy frameworks for a sustainable future.
<b>OpenAI Platform Changelog</b>	<a href="https://platform.openai.com/docs/changelog">https://platform.openai.com/docs/changelog</a>	A log of OpenAI's software updates, tracking new features, improvements, and bug fixes.
<b>Oxford Dictionary AI Definition</b>	<a href="http://www.oed.com/dictionary/artificial-intelligence_n?tab=meaning_and_use#38531565">www.oed.com/dictionary/artificial-intelligence_n?tab=meaning_and_use#38531565</a>	Provides contemporary definitions of artificial intelligence and its linguistic evolution.

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Paperdigest.org</b>	<a href="http://www.paperdigest.org/">www.paperdigest.org/</a>	An AI tool that summarizes academic research papers, extracting key insights and main points to make complex research easier to digest.
<b>Perplexity.ai</b>	<a href="http://www.perplexity.ai/">www.perplexity.ai/</a>	An AI-powered search engine that answers complex questions by retrieving and summarizing relevant information from credible sources, delivering concise and reliable responses.
<b>Times of India—China Cognitive Warfare</b>	<a href="https://timesofindia.indiatimes.com/world/china/how-china-is-using-cognitive-warfare-to-influence-global-perceptions/articleshow/110303476.cms">https://timesofindia.indiatimes.com/world/china/how-china-is-using-cognitive-warfare-to-influence-global-perceptions/articleshow/110303476.cms</a>	Analyzes China's strategies in cognitive warfare, focusing on its methods to shape global narratives and influence public opinion.
<b>TrendWatching—Drafted by AI</b>	<a href="https://app.trendwatching.com/subtrends/drafted-by-ai">https://app.trendwatching.com/subtrends/drafted-by-ai</a>	Part of TrendWatching's services, this section identifies and tracks AI-driven subtrends, helping companies leverage AI advancements to stay relevant and competitive in evolving markets.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



**FIGURE 8.1** QR Code to Online Support Material

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## PART III

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# AI-driven Consumer Dynamics

Chapter 9 examines the use of AI in the study of consumer behavior and the factors influencing consumers' decisions relative to buying, using, and disposing of goods, services, and ideas. It examines how AI-driven technologies such as machine learning algorithms, AI-driven data analysis, and virtual assistants redefine traditional consumer behavior models of consumer personality and self, motivation, decision-making, and more.

Chapter 10 not only explores the theoretical aspects of AI use in consumer insights—such as AI assistants, customer segmentation, personalization, and data analysis—but also provides practical insights into their implementation. Integrating AI in consumer insights and marketing analytics provides substantial advantages for researchers and consumers due to its ability to enhance data analysis, offer deeper customer insights, and create more targeted marketing strategies.



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# Consumer Behavior and AI

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## LEARNING OBJECTIVES

Readers will be able to:

- 1 Evaluate the transformative role of AI in consumer behavior.
- 2 Critically analyze AI's impact on traditional consumer behavior models.
- 3 Identify the opportunities and challenges presented by integrating AI in consumer behavior.
- 4 Explore the ethical considerations and AI's influence on consumer behavior marketing practices.
- 5 Assess the implications for practitioners in adopting AI technologies.

## CONSUMER BEHAVIOR AND AI

The intersection of artificial intelligence (AI) and consumer behavior is becoming increasingly prominent in the rapidly evolving marketing landscape. Key areas such as consumer needs, motivation, perception, learning, memory, attitudes, persuasion, decision-making processes, and consumer segmentation must be re-examined through the lens of AI. This chapter is poised to be an essential addition to the academic discourse, providing marketing students with crucial insights into this dynamic field. Each section highlights how AI-driven technologies like machine learning (ML) algorithms, the use of large language models (LLMs), AI-driven data analysis, and virtual assistants are becoming increasingly prominent in their influence on consumer behavior.

The chapter begins with an overview of traditional consumer behavior theories and frameworks, integrating practical examples and case studies to illustrate how AI

developments have transformed core concepts. With a focus on predictive analytics, personalization, customization, and sentiment analysis, this chapter features compelling case studies from leading companies like Amazon and Netflix, illustrating their pioneering use of AI in consumer behavior strategies.

Following this, we explore the opportunities AI presents for transforming traditional consumer behavior models. With AI tools, marketers can implement hyper-precise and impactful personalized marketing strategies. For example, marketers can utilize AI's data processing capabilities to quickly gather customer preferences and offer personalized experiences, enhancing the digital customer journey. Murár (2023) concludes that the main benefits of customized marketing include increased customer engagement, improved conversion rates, higher customer lifetime value, deep customer insights, and stronger brand loyalty.

After a discussion of opportunities, we explore the challenges of integrating AI into consumer behavior. Ensuring the accuracy and quality of AI-generated outputs is critical, as misinformation or errors can distort market research and customer profiling (Rabby et al., 2021). Additionally, ethical concerns regarding data privacy and security must be addressed to maintain consumer trust (Gkikas & Theodoridis, 2022). The potential for AI to perpetuate biases in data analysis is another significant challenge, necessitating the implementation of robust data governance frameworks and continuous auditing of AI systems for fairness and accuracy (Chaka, 2023).

Finally, this chapter looks toward the future and considers AI's impact on marketing professionals, educators, and consumers. AI is reshaping job functions, skills, and expectations for marketing professionals; redefining curriculum and teaching approaches for educators; and influencing how consumers interact with brands, make decisions, and shape their experiences.

## CONSUMER BEHAVIOR MODELS AND FRAMEWORKS

A typical university course on consumer behavior examines how consumers make decisions about purchasing, consuming, and disposing of products and services, including several topics on the nature of human beings and the factors influencing their behaviors. Exploration of perception, for example, helps students understand how personal experiences, motivations, and intrinsic (like texture or flavor) and extrinsic (such as branding and packaging) factors influence how consumers perceive products. Examining personality and self-image allows us to explain how psychological traits shape consumer behavior and affect purchasing decisions, which marketers can use for targeted advertising. Learning about attitudes—cognitive, affective, and conative components—helps marketers understand how they affect consumer choices. It is important, therefore, to study the steps consumers go through when making purchases, from recognizing a need, searching for information, and evaluating alternatives, to finally making a product choice. This section briefly explores the traditional consumer behavior models and frameworks and discusses the implications of AI.

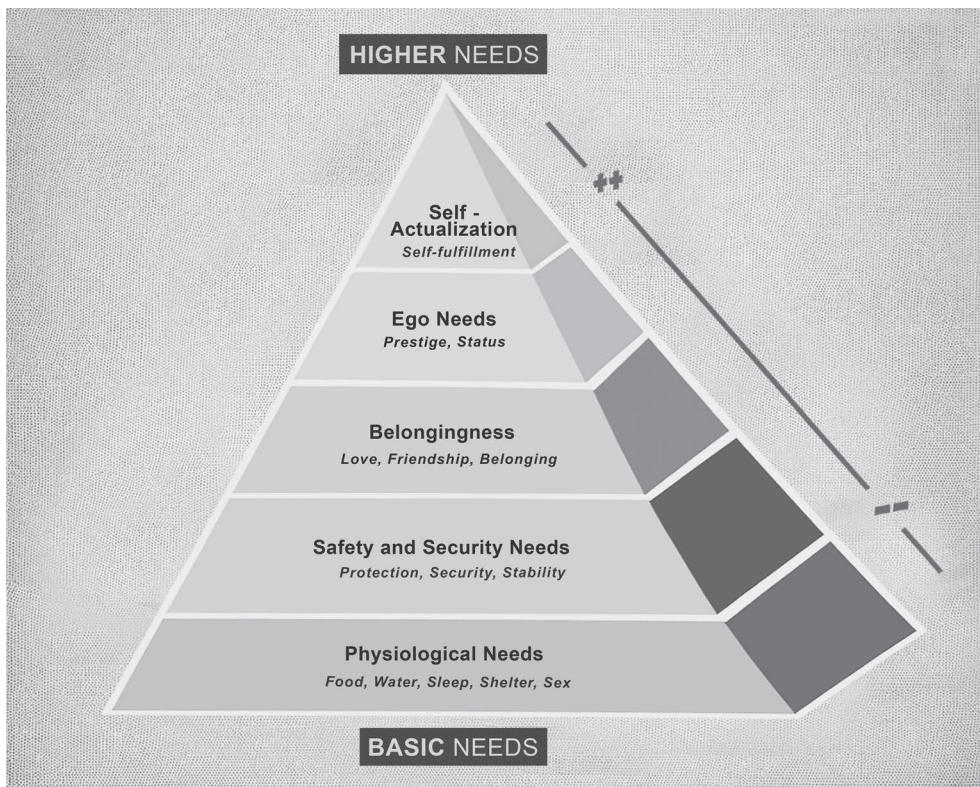
## Consumer Perception

Perception is the “awareness or understanding of sensory information” (Krishna, 2012, p. 334) and the process of selecting, organizing, and interpreting that sensory information we receive from our sensory receptors (i.e., our eyes, nose, mouth, ears, and skin). Consumers’ perceptions of products are highly personal and shaped by their prior experiences, possible explanations they conceive, and their current motivations and interests (Schiffman & Wisenblit, 2021). Consumers evaluate products based on both intrinsic and external cues. Intrinsic cues include the product’s physical properties like size, color, flavor, or aroma. In contrast, consumers also rely on extrinsic cues, such as packaging, price, branding, and promotional activities, external to the product itself, to judge its quality. This distinction between intrinsic and extrinsic cues can also extend to consumers’ trust in AI, where the perceived nature of a task can significantly influence their reliance on algorithmic decisions. Castelo et al. (2019) found that consumers are more likely to trust AI algorithms for tasks they perceive as objective (e.g., data analysis) but tend to avoid them for subjective tasks (e.g., making personalized recommendations), where human intuition is believed to be more relevant. They concluded that increasing the perceived objectivity of a task can improve consumers’ trust in algorithms.

AI applications in sensory augmentation are still emerging, with sensor-AI combinations advancing through marketing and technological innovation. As consumers face increasing choices, offline retailers have invested in sensory-rich shopping environments to drive purchases (Inman et al., 2009) but the resulting sensory overload often diminishes communication effectiveness. Hence, marketers look for new technologies to counter this effect. Recent breakthroughs in AI have paved the way for blending machine learning techniques with existing sensory substitution and augmentation tools (Longin & Deroy, 2022). For example, Esch et al. (2020) found that AI-enabled checkouts and in-store communication provide heightened sensory stimulation compared to traditional self-service options and significantly enhance purchase intent and store atmosphere evaluations. This sensory stimulation plays a crucial role in shaping consumers’ positive perceptions and driving higher patronage likelihood. However, when consumers perceive AI technology as more threatening, its ability to positively influence sensory perception and purchase behavior diminishes.

## Maslow’s Hierarchy of Needs

Despite its criticisms, an examination of Maslow’s (1970) hierarchy of needs and its accompanying pyramid is essential in any comprehensive study of consumer behavior. Figure 9.1 provides a summary of the hierarchy. Maslow’s theory suggests that our actions are driven by a hierarchy of needs, ranging from basic physiological necessities to the pursuit of self-actualization. Hence, individuals must first address their most basic needs, such as food and shelter, before focusing on higher-level aspirations like self-esteem and personal fulfillment. This hierarchy is depicted as a pyramid, with each level of needs being satisfied to some extent before moving on to higher needs. However, lower-level needs may still influence behavior



**FIGURE 9.1** Maslow's Hierarchy of Needs

even when higher needs become the focus, especially if a lower need becomes unsatisfied again (Kotler et al., 2023). Maslow's hierarchy is particularly relevant in marketing, where understanding these motivational levels can help craft messages that appeal to specific consumer needs depending on which level they are likely to be addressing. For example, an advertisement for a luxury car might appeal to needs for status and self-esteem, while essential food products might be marketed with an emphasis on physiological sustenance.

AI has the potential to address fundamental needs like safety and security and foster higher-level needs such as belonging and self-esteem through personalized and emotionally supportive interactions. Puntoni et al. (2021), identify four types of consumer experiences with AI including 1) data capture, 2) classification, 3) delegation, and 4) social and discuss managerial and policy recommendations. They raise important concerns from a "psychological perspective" (Puntoni et al., 2021, p. 134) about how the uncertainty surrounding AI data capture may affect consumers' needs for safety and security. Noble and Mende (2023, p. 751) argue that AI-driven robots can serve as a "secure base" or a "safe haven," providing emotional support and comfort to consumers, which can strengthen a consumer's sense of belonging by giving them a reliable and emotionally supportive interaction in their daily lives. At higher levels of the hierarchy, AI can fulfill self-esteem and belonging needs through personalized experiences and emotionally supportive AI-driven interactions.

### Application 9.1 Promotional Strategy Using Maslow's Hierarchy of Needs

Create targeted promotional strategies for a smartphone based on Maslow's hierarchy of needs, both with and without AI assistance.

#### Step 1: Manual Strategy Development (Without AI)

- 1 Create five promotional tactics for a smartphone, each targeting a different level of Maslow's hierarchy:
  - Physiological Needs: Highlight features that fulfill basic needs (e.g., battery life).
  - Safety Needs: Emphasize security features (e.g., data protection).
  - Social Needs: Showcase social features (e.g., video calling).
  - Esteem Needs: Focus on exclusivity or premium design.
  - Self-actualization Needs: Promote tools for creativity and self-expression.
- 2 Illustrate one or more concepts with a quick poster or storyboard for a 30-second ad.
- 3 Present your strategies to the class, explaining why each tactic is effective for its respective need level.

#### Step 2: AI-assisted Strategy Development

- 1 Enter the following prompt into an AI platform:
 

"Please develop promotional tactics for a smartphone, each targeting a different level of Maslow's hierarchy of needs. Provide a brief promotional tactic and explanation for each level (Physiological, Safety, Social, Esteem, and Self-Actualization)."
- 2 Compare the AI's suggestions with your own. Note any unique insights or differences.
- 3 Discuss which tactics might resonate best with consumers and how AI influences promotional ideas.

## Consumer Personality

Personality is defined by the deep psychological traits that influence and mirror our thoughts and actions. These traits include unique qualities, attributes, and behaviors that distinguish one person from another, and numerous theories have been developed to account for various factors (Kassarjian, 1971; Kotler et al., 2023). Personality showcases individual variability and tends to be stable over time, yet it can evolve due to life experiences and aging (Schiffman & Wisenblit, 2021). It plays a crucial role in how consumers



react to marketing efforts and their consumption patterns across various products and services. The multi-trait approach to personality theory identifies several traits representing a significant portion of an individual's personality. The most widely used model in marketing from this approach is the Five-Factor Model (Wiggins, 1996; Mittal, 2017). This model identifies five fundamental traits that interact and influence behavior in various situations, such as:

- Extroversion: Characterized by sociability and boldness.
- Instability or neurotic: Associated with being moody and temperamental.
- Agreeableness: Includes being sympathetic and polite.
- Openness to Experience: Involving creativity and an appreciation for art.
- Conscientiousness: Marked by precision and efficiency.

Each trait manifests in various contexts. Consumers often select products that align with their personalities. For example, a reserved person might avoid flashy items, feeling they don't suit their style. Conversely, they might choose products to compensate for perceived personality gaps, like a bold sports car to appear more assertive. Thus, product and brand choices help consumers express and shape their personalities. Therefore, marketers should communicate benefits that match consumer personalities or help align them with the brand (Mothersbaugh & Hawkins, 2016).

The increasing role of AI in predicting consumer personality traits is reshaping advertising strategies and raising questions about how AI-mediated interactions impact user engagement. Shumanov et al. (2022) investigated how AI can predict consumer personality traits to improve the effectiveness of advertising. They found that matching advertising messages with consumers' AI-predicted personality traits can significantly enhance persuasion. For example, neurotic consumers respond better to ads that reduce perceived risks and offer social acceptance cues, while extroverts are more influenced by goal attainment and social cues in ads. Mou & Xu (2017) found that when interacting with AI, users exhibited lower levels of openness, agreeableness, extroversion, and conscientiousness compared to when they interacted with other humans. The researchers suggested that people are less inclined to reveal their full personality when engaging with AI. The study also highlighted that interacting with AI can feel less personal and more constrained, which may impact how consumers engage with technology in social settings.

## Self-concept

Our self-perceptions guide our behavior. Self-concept is the collection of thoughts and emotions we associate with ourselves. It encompasses attitudes toward personal attributes and characteristics. Self-concept can be divided into four categories: Actual vs. ideal and private vs. social (Mothersbaugh, 2023). The actual self-concept is *who we are now*, while the ideal self-concept is *who we aspire to be*. The private self is how we see or want to see ourselves, and the social self is *how others perceive us or how we want to be perceived*.

People's purchases and consumption habits often reflect their desire to align with their ideal self-concept or maintain their current self-image, even unconsciously. Marketers should, therefore, match product images with the self-concepts of their target audience for

effective market segmentation (Hong & Zinkhan, 1995). Additionally, brand preference is influenced by “self-image congruity” or “how much a consumer’s self-concept matches the personality of a typical user of the brand” (Helgeson & Supphellen, 2004, p. 205), which varies based on the product’s symbolic value, consumption context, and individual traits like valuing public opinion in visible settings. Puntoni et al. (2021) suggest that AI-powered customization of services can offer exceptional opportunities for self-improvement and, potentially, redefine the nature of consumer’s self. They cite Kuchler’s (2020) observations that data from smartphones, fitness trackers, as well as ambient sensors provide personal health care solutions and self-enhancements.

As AI becomes more adept at understanding consumer behaviors and preferences, marketers can better target individuals by matching their product offerings to the evolving self-concept of the consumer. This improves engagement and highlights the growing need for marketers to consider the ethical implications of using AI to influence self-concept and self-image. For example, delegation experiences—when consumers rely on AI to perform tasks they would typically handle themselves (Puntoni et al., 2021)—can empower users but also raise concerns about losing control and being replaced. Consumers may feel threatened by AI’s role in substituting human labor because it undermines their ability to attribute outcomes to personal skills, diminishes opportunities for skill development, and can erode self-efficacy. Puntoni et al. (2021) also argue that this sense of loss is particularly acute in contexts where personal identity and productivity are intertwined, as individuals may prefer tasks that offer more personal control and engagement.

Furthermore, AI, particularly deepfakes and creative AI, can manipulate visual and audio content in ways that significantly impact how consumers perceive themselves and the brands they interact with. For example, deepfake technology can alter a model’s appearance in advertisements to better align with a consumer’s ideal self-concept, which could enhance engagement and raise ethical concerns regarding authenticity (Campbell et al., 2022). Generative AI provides highly personalized recommendations based on past behaviors and preferences, enhancing the perception of relevance and accuracy in digital marketing. This personalization reinforces self-concept by offering products and services that align with a consumer’s ideal or social self-image (Hermann & Puntoni, 2024). However, Puntoni et al. (2021) argue that in AI predictions, consumers may react negatively if they perceive the AI to be (mis)classifying them based on group identity, especially when this assigned identity feels non-central or outdated. This could trigger stronger uniqueness motives, making consumers feel their agency is undermined, especially as they navigate multiple identities. Hence, when AI systems are involved in categorizing or predicting their behavior based on group membership, it may provoke resistance if consumers feel their uniqueness is not adequately recognized.

### **Application 9.2 Self-concept in Marketing Strategy**

Analyze and apply the concepts of self (actual self, ideal self, social self, ideal social self-image) to different product marketing strategies, with and without AI assistance. This activity will deepen your understanding of self-concept in marketing, encourage strategic thinking in product positioning, and provide insight into how AI can assist in refining or expanding marketing strategies.

**STEP 1: MANUAL STRATEGY DEVELOPMENT (WITHOUT AI)**

- 1 As the marketing manager, decide which aspect of self-concept (actual self, ideal self, social self, or ideal social self) would most effectively promote each of the following products. Briefly justify your choice for each:
  - a Energy drink
  - b Smartwatch
  - c Sweater
  - d Luxury car
  - e Fitness equipment
- 2 Write a short explanation for each product, outlining why the chosen self-concept would resonate with target consumers.

**STEP 2: AI-ASSISTED STRATEGY DEVELOPMENT**

Copy and enter the following prompt into an AI platform to generate AI-driven strategies:

"I am the marketing manager for the following products and need to determine which aspect of self-concept (actual self, ideal self, social self, or ideal social self) would be most effective in appealing to my target consumers for each product. Please suggest the most fitting self-concept for each:

- a Energy drink
- b Smartwatch
- c Sweater
- d Luxury car
- e Fitness equipment

Provide a brief explanation for each suggestion."

Review the AI's suggested self-concept approaches for each product and note any differences or similarities compared to your ideas.

**Discussion Questions**

- How did the AI apply the self-concept ideas to each product? Did you notice any biases in the AI's responses?
- Evaluate the creativity of the AI's suggestions. Did the AI provide unique perspectives, or were your strategies more tailored to consumer behaviors?

**Consumer Decision-making**

Understanding the consumer decision-making process is crucial for effectively targeting marketing efforts and enhancing customer satisfaction. This process typically unfolds in

four steps, each critical in how consumers identify and resolve their needs. These steps generally are as follows: 1) Problem recognition, 2) information search, 3) evaluation of alternatives, 4) product choice, and 5) post-purchase behavior (Bettman et al., 1998; Solomon & Russell, 2023).

### Problem Recognition

This initial step occurs when a consumer perceives a significant difference between their current and desired states, which triggers the decision-making process. Examples include running out of gas or feeling dissatisfied with a car's image despite its functional condition.

### Information Search

Once a problem is recognized, consumers seek information to solve it. This search can vary from a focused pre-purchase search for specific details to more casual browsing for enjoyment or to stay informed about market trends. The extent of the search tends to increase with the importance of the purchase, the consumer's need to learn, and the ease of obtaining relevant information.

### Evaluation of Alternatives

Consumers evaluate different products or brands as potential solutions, often from a set of known alternatives (evoked set) and those seriously considered (consideration set). The challenge here is the vast array of choices available in modern consumer markets, ranging from hundreds of options to slight variations within a single brand.

### Product Choice

The final selection is made from the evaluated alternatives. A brand's presence in a consumer's evoked or consideration set is critical; once rejected, it is challenging to be reconsidered, highlighting the importance for marketers to ensure the product performs well upon introduction.

### Post-purchase Behavior

Post-purchase behavior involves a consumer's product evaluation against expectations, leading to satisfaction or dissatisfaction, which significantly influences their future purchase behaviors and communications to others. Companies focus on maximizing customer satisfaction post-purchase by offering robust customer support and services to foster positive consumer relations and repeat business (Hoyer et al., 2023).

The evaluation of alternatives, the evaluative criteria, and the various decision rules consumers use to assess their choices are often the most challenging. Evaluative criteria are consumers' key dimensions to assess competing options, varying from functional attributes to experiential qualities. If all options are rated similarly to a common attribute,

such as surround sound in TVs, consumers must rely on determinant attributes—unique features that help differentiate choices—to make decisions (Mothersbaugh, 2023). Recognizing this, marketers often guide consumers toward specific determinant attributes, like the use of natural ingredients in products, to influence their decisions and promote unique product features.

Incorporating AI technologies has introduced an additional layer of complexity to consumers' decision-making. For example, Danienta & Rindfleisch (2020) found that AI assistance improves evaluations of experiential purchases (e.g., movie tickets). When participants used AI to gather information about a movie, their assessment and sense of self-connection to the experience were higher than those who did not use AI. Arango et al. (2023) found that consumers were less likely to donate to charities using AI-generated images due to reduced empathy and emotional response. This negative effect can be mitigated by emphasizing ethical motives or using AI images in emergencies.

AI is increasingly critical in shaping consumer decision-making processes by providing predictive analytics, personalized recommendations, and curated content. Through recommender systems, AI helps consumers navigate a vast array of choices by narrowing down options based on past behaviors, preferences, and digital footprints. For instance, AI-driven systems can predict consumer preferences in streaming services or e-commerce platforms, leading to more efficient decision-making and enhancing user satisfaction. However, the implementation of AI for decision-making can result in “algorithmic aversion” for some consumers, who may feel uncomfortable with AI replacing human judgment. On the other hand, “algorithmic appreciation” occurs when consumers are given transparency and control over AI decisions, fostering trust and engagement in the process (Hermann & Puntoni, 2024). Furthermore, AI can not only predict consumer preferences but also play a role in shaping consumer choices by introducing personalized options based on past behaviors and preferences. This process of AI-driven curation can influence future behaviors and decision-making, as consumers may not always be fully aware of the subtle guidance provided by AI systems (Jain et al., 2023). This combination of predictive power and the ability to personalize consumer experiences highlights both the opportunities and ethical challenges when using AI to influence decision-making, requiring careful consideration of consumer autonomy and transparency.

## Consumer Attitudes

Brands and organizations aim to shape consumer attitudes to influence their buying habits. An attitude is a learned tendency to consistently react positively or negatively toward something in our surroundings (Petty et al., 1991), such as a store, TV show, or a product. These attitudes, formed by various influences, significantly impact an individual's lifestyle choices and consumption behaviors.

Attitudes have three components: cognitive (beliefs), affective (feelings), and behavioral or conative (response tendencies) (Lantos, 2015). The cognitive component of an attitude toward a product, like a scooter or a video game, is shaped by a consumer's beliefs about the product. For instance, consumers might believe that younger people favor these products, that they contain entertainment value, are competitively priced, and are produced by a sports-oriented company. These beliefs can be about the emotional rewards

of using the product and its objective characteristics, which are often evaluative: Viewing features like exercise or relaxation provision as positive. Effective marketing emphasizes the benefits of these features, helping consumers understand how the features translate into personal benefits.

The affective component of an attitude consists of subjective beliefs and evaluations based on personal likes or dislikes, influenced by individual tastes (Lantos, 2015). This includes emotional benefits, where personal reactions, such as enjoying classical music or disliking energy drinks, reflect deeper feelings about products. These feelings contribute to evaluative beliefs, which may stem from moods or general feelings rather than rational or cognitive beliefs. For instance, a consumer's sense of technological savviness may arise from their belief in the quality and value of a particular scooter model, along with its brand's alignment with that consumer's preference for attitude of humility.

The conative component of an attitude refers to behavioral intentions and actions concerning an attitude object, often expressed as intentions to perform specific actions, like purchasing (Petty et al., 1997). This component bridges attitudes and actual behaviors, aiding marketers in predicting future behaviors. Influenced by cognitive (knowledge-based) and affective (emotion-based) elements, the conative component can be shaped by promotions or by aligning products with desirable lifestyles.

Marketers aim to influence consumer behavior by modifying cognitive elements of consumer attitudes and raising ethical, social, and regulatory issues. They use four main strategies: Altering existing beliefs, adjusting the perceived importance of beliefs, introducing new beliefs, and modifying ideal standards. Marketers employ classical conditioning to increase affection, pairing a brand with a likable stimulus (e.g., music) to enhance appeal. They also create positive reactions to ads or websites using humor, celebrity endorsements, or emotional appeals. These strategies increase liking for the ads and improve attitudes toward the brand, subtly influencing consumer behavior (Mothersbaugh & Hawkins, 2016). These tactics fundamentally reshape how consumers think about a product or service.

AI profoundly shapes customer attitudes through its ability to personalize interactions, predict preferences, and enhance the overall consumer experience. AI-driven systems, such as recommendation systems and chatbots, create tailored experiences by analyzing consumer behavior and preferences, fostering relevance and personalization. However, consumer attitudes toward AI can vary; while many appreciate AI's efficiency and customization, others may feel discomfort with automation or lack of human involvement, a phenomenon known as "algorithm aversion" (Hermann & Puntoni, 2024, p. 3). As discussed in the previous section on decision-making, "algorithmic aversion" refers to the discomfort some consumers feel with AI's role in making decisions. This concept also influences consumer attitudes, where the lack of human involvement in AI-driven experiences can sometimes lead to a sense of detachment or reduced authenticity. On the other hand, when AI systems are transparent and allow consumer control, trust and positive attitudes may increase (Jain et al., 2023). Additionally, the humanization of AI, such as making chatbots more human-like, can positively influence consumer attitudes, but it can backfire if the AI fails to meet expectations. Marketers must carefully balance the benefits of AI-driven personalization with transparency and ethical considerations to maintain consumer trust and brand loyalty.

## OPPORTUNITIES

The widespread adoption of AI in marketing opens numerous opportunities for marketers to enhance their strategies and improve consumer engagement. AI enables hyper-precise personalized marketing, improved consumer segmentation, and predictive modeling. According to a recent study by Salesforce, more than half (51%) of marketing professionals now use AI tools in their practice (Hammond, 2024). These tools empower marketers to deliver highly tailored content, anticipate consumer needs, and foster deeper connections with their audiences.

For example, personalized recommendation engines, predictive customer behavior models, and adaptive ad strategies are all rooted in AI's ability to analyze large volumes of data and detect patterns that would otherwise go unnoticed. This allows marketers not only to reach the right audiences but also to present them with highly relevant content. Such implementations of AI-driven personalization are proven to boost customer satisfaction and engagement, enhancing brand loyalty by delivering meaningful, customized interactions across digital platforms.

The increasing use of AI in marketing reflects a broader shift toward data-driven approaches, where AI-driven insights allow marketers to refine strategies, accurately predict consumer behaviors, and engage more effectively across diverse digital platforms.

### Hyper-precise, Personalized Marketing Tactics

With AI tools, marketers can implement hyper-precise and impactful personalized marketing strategies. By leveraging AI technologies, marketers can better understand consumer behaviors, preferences, and trends, allowing for the delivery of highly tailored and relevant content to individual consumers. A recent study by Verma et al. (2021) analyzed the impact, implementation, and challenges of autonomous customer experience management (CEM). The study shed light on the instrumental role of AI and Machine Learning (ML) in establishing an intelligent network and delivering customer value. By leveraging AI-driven chatbots with Natural Language Processing (NLP), notable improvements in customer experience were achieved. For example, traditional retail stores that adopted the use of AI and Internet of Things (IoT) became “smart” retail stores that evaluated customer experiences and ease of shopping. For instance, Vision Group's InstaGnG solution transformed coolers and kiosks into automated vending solutions using AI-based image recognition and its IoT platform, reducing shrinkage and staffing costs and improving customer satisfaction. (KPMG, 2022). The application of AI and ML algorithms streamlined data processing, leading to more informed decision-making processes and offering a new opportunity to analyze customer habits and preferences.

AI's role in revolutionizing marketing tactics is to facilitate a more consumer-centric approach in online shopping that anticipates consumer needs and enhances the overall shopping experience through personalized engagements. AI-driven approaches use AI in online shopping to create a higher degree of personalization, resulting in a more efficient sales process. AI systems stimulate the spread of new marketing approaches to



efficiently reach target customers and provide improved consumer experiences (Murthy et al., 2023).

Customized and personalized messaging/content is crucial in understanding and building consumer relationships. Barthle (2023) compared personalized versus non-personalized messaging and content on Spotify, indicating that 81% of Spotify's listeners identified personalized playlists as their favorite feature. This capability of AI to refine and personalize user interactions on digital platforms showcases the shift toward more dynamic and responsive consumer engagement models.

The following are three examples of personalized vs. non-personalized messaging:

- Amazon uses AI to improve demand forecasts, make better pricing decisions, and optimize product placements. These strategies, underpinned by AI's predictive analytics capabilities, ensure that the right products are connected with customers at the right time and place, potentially leading to increased customer engagement and higher conversion rates (Manasa & Devi, 2022).
- Spotify utilizes AI algorithms to curate personalized playlists for each user based on their "listener taste profile," which considers listening history, genres, and favorite artists. This customized approach enhances user satisfaction/engagement and drives increased platform usage (Barthle, 2023, para. 11).
- Netflix utilizes integrated AI algorithms to recommend personalized movies and show suggestions based on a user's viewing history and preferences and data analysis of implicit and explicit user data. This hyper-personalized content strategy enhances user retention and satisfaction by almost predicting what the user is interested in without them realizing it (Steck et al., 2021).

This level of personalization can significantly enhance the impact of marketing efforts and increase consumer engagement. Customizing and enhancing the consumer's experience based on their perception of value (as well as, potentially, personality traits or views of self) will lead to a frictionless transaction or communication experience.

## **Use of AI for Predictive Modeling**

AI offers the capability for predictive modeling. Through analyzing large volumes of consumer data, AI tools can discern meaningful patterns and trends, empowering marketers to make informed decisions and accurately forecast consumer behavior. This allows marketers to anticipate consumer needs and preferences, creating more targeted and effective marketing campaigns.

The following are three examples illustrating AI-influenced predictive analysis:

### **E-commerce Product Recommendations**

Online retailers use AI algorithms to analyze customer browsing history, purchase patterns, and preferences to segment customers effectively. By examining individual consumer behaviors, AI algorithms can provide accurate product recommendations, creating a personalized shopping experience and increasing the likelihood of purchase (Pacun, n.d.).



## Data and Trend Analysis

Orogun and Onyekwelu (2019) discuss how ML techniques such as Association Rule Mining and the Apriori algorithm can predict customer behavior by analyzing online retail data. The study highlights the ability of AI to identify significant patterns and trends, enabling businesses to optimize their marketing strategies and improve customer engagement. Leveraging predictive modeling allows platforms to curate personalized content recommendations that accurately predict user preferences and enhance user satisfaction.

## Targeted Advertising Campaigns

Advertisers can use AI for trend analysis and predictive modeling to identify consumer trends, behaviors, and preferences. Using predictive analytics, marketers can craft targeted advertising campaigns tailored to specific consumer segments, which ensures more effective and resonant messaging that aligns with consumer needs and preferences. AI-based delivery systems use ML, data mining, and big data to segment and personalize advertisements, showing the proper advertisements to the right audiences. This application of AI allows marketers to optimize advertising spend in real time and at scale, increasing customer satisfaction and return on investment (ROI) (Orogun & Onyekwelu, 2019).

As marketers understand and navigate these opportunities, they can effectively integrate AI into the study and practice of consumer behavior. The next section examines the various challenges presented by the impact of AI on consumer behavior.

## CHALLENGES

Despite its potential, AI integration in marketing presents challenges such as ensuring the accuracy and quality of AI outputs, addressing data security, and ethical concerns. This section discusses these challenges and offers strategies for overcoming them. Salesforce reported marketers' concern that company data is not well-suited for generative AI and that AI lacks human creativity and context to solve workplace challenges, accuracy and quality, trust (i.e., data security, ethics), training, and job safety. Al Khaldy et al. (2023) emphasize the significant impact of predictive analytics and AI on digital marketing strategy and ROI, noting that businesses effectively utilizing these technologies report higher engagement, conversions, and revenue growth. However, they also recognize challenges in ensuring data accuracy and the quality of AI-generated outputs, which are crucial for reliable market predictions and customer insights.

### Accuracy and Quality Concerns

One of the significant challenges in leveraging AI for marketing is ensuring the accuracy and quality of AI-generated outputs. The reliance on AI systems for data analysis, customer insights, and decision-making processes intensifies the need for precision and reliability. Misinformation or errors in AI processing can skew market research, distort customer profiling, and lead to flawed strategic decisions, potentially damaging a brand's

reputation and financial performance. The root of accuracy and quality concerns often lies in the data used to train AI models. AI systems are only as good as the data fed into them; hence, any biases, inconsistencies, or inaccuracies in the data can be reflected in the outputs. Hemalatha (2023) emphasizes the necessity of high-quality data and transparent AI models in ensuring the accuracy and effectiveness of AI-driven marketing strategies. They argue that AI systems may propagate errors and biases without these foundational elements, leading to suboptimal marketing outcomes (Hemalatha, 2023). For instance, if an AI model is trained on historical sales data that contains anomalies or unrepresentative trends, it may forecast inaccurate future sales patterns, leading to poor inventory management and marketing planning.

The challenges of ensuring the accuracy and reliability of AI systems in marketing resonate with broader issues in AI content detection. In a study assessing the efficacy of AI content detection tools, Chaka (2023) found that these tools often struggled to distinguish between AI-generated and human-produced content accurately. This difficulty mirrors the challenges in marketing with AI, where ensuring the accuracy of AI-generated insights and decisions is critical. Chaka's (2023) study highlights the imperative for continuous evaluation and refinement of AI tools to maintain their reliability and effectiveness in marketing applications. The significance of continuous monitoring and ethical considerations in AI-driven marketing is further highlighted by Hemalatha (2023), who notes that maintaining ethical standards and regularly auditing AI systems are crucial for ensuring long-term reliability and consumer trust in AI-generated outputs (Hemalatha, 2023).

It is crucial to establish robust measures to ensure the quality of AI applications. Continuous monitoring of AI systems is essential to detect and correct errors in real time. Regular audits of AI-generated outputs against actual outcomes can help identify discrepancies and improve model accuracy. This proactive approach allows organizations to continuously refine their AI tools, ensuring they remain effective and reliable.

## **Ethical Implications: Transparency, Bias, and Consumer Autonomy**

The rise of AI in marketing introduces significant ethical considerations, particularly around data collection, transparency, and bias. With consumers becoming more aware of how their data is used, ethical data collection and consumer control over personal information are paramount. Transparent and fair data practices build trust, allowing consumers to access, correct, and delete their data, thus enhancing their autonomy and engagement with AI-driven brands (Kumar & Suthar, 2024). Conversely, lack of transparency or perceived bias can lead to skepticism or even negative behaviors like boycotts. It is crucial to address biases in AI systems to ensure that all consumer groups are treated fairly, as biases undermine trust and have potential social ramifications (Silverback Strategies, 2024).

Additionally, the ethical use of AI extends beyond privacy. AI has the potential to perpetuate biases present in its training data, which can lead to stereotyping or alienating certain consumer groups (Ferrara et al., 2023). Companies must implement robust data governance frameworks and continuously audit AI systems to ensure fairness and accuracy. Ethical AI practices not only build consumer trust but also enhance the long-term sustainability of marketing strategies. In an era of growing consumer awareness around

data privacy, companies prioritizing ethical AI practices are likely to gain a competitive edge by fostering trustworthy customer relationships.

AI systems must be inclusive and designed to enhance consumer autonomy. If AI models are biased or fail to represent diverse consumer groups, they risk reinforcing stereotypes or alienating segments, leading to brand avoidance or negative word-of-mouth (Hermann et al., 2023). AI systems that incorporate empathy and empower consumers through adaptive and personalized interactions can enhance autonomy and lead to more satisfying consumer experiences (Liu-Thompkins et al., 2022). On the contrary, AI that subtly manipulates consumer decisions can erode trust and disempower users, highlighting the importance of ethical design in AI-driven marketing.

## Trust and Data Security

Trust is a cornerstone of effective marketing, and the advent of AI in this domain accentuates critical concerns around data security and ethical practices. As AI applications increasingly process vast amounts of personal and sensitive consumer data, the potential for misuse or breach of privacy significantly impacts consumer and corporate trust. The mere concept that AI-driven machines can interpret data that can be analyzed into human emotions and communication is powerful (Gkikas & Theodoridis, 2022). Companies must carefully navigate these challenges and newfound access to insights, careful to maintain their reputation and customer relationships.

Data security is paramount in AI-driven marketing. With the sophistication of cyber threats, ensuring the protection of consumer data managed by AI systems is crucial. A single data breach can lead to substantial financial losses and, more importantly, cause a long-lasting dent in consumer trust. In addition, the awareness of data rights is growing among consumers, who are likely to avoid businesses that fail to protect their personal information. The ethical use of AI in marketing extends beyond securing data against unauthorized access; it involves a broad spectrum of issues, including the transparency of AI-driven decisions and processes and the fairness and unbiased nature of AI algorithms. Privacy concerns drive consumers to be less willing to share personal information, potentially leading to a direct loss of revenue for firms and inhibiting data-based innovation and marketing (Rabby et al., 2021). Moreover, balancing data privacy with personalization is critical as excessive data collection without proper privacy measures can erode consumer trust (Davenport et al., 2019).

This context sets the stage for understanding the ramifications of AI-driven deception, as shown by a deepfake scam that impacted a multinational company in Hong Kong in 2023. Scammers utilized sophisticated deepfake technology to create convincing video conferencing calls with fabricated imagery of real individuals, deceiving an employee into transferring substantial funds. (Edwards, 2024; Tan, 2024). This incident sheds light on the intricate nuances of deception that were expertly executed during the scam, the confusion in the investigation process, and the financial impact of the scam. Consumer behavior in marketing is fundamentally changing with new abilities, challenges, and opportunities presented by the use of AI. The misuse of customer data, exemplified by the Cambridge Analytica and Facebook privacy scandals, underscores the need for policies and safeguards to protect the public (Wong, 2019). Building trust in AI-driven marketing requires transparent, ethical practices, clear policies on AI use, and stakeholder involvement to ensure legal and ethical alignment.

**CASE STUDY 9.1****The Deepfake Deception: Trust and Ethics in AI-driven Marketing**

In 2023, TechSavvy Ltd., a prominent software provider headquartered in Ontario, Canada, fell victim to a costly cybersecurity breach that highlighted critical vulnerabilities in AI-driven technologies. During a critical transaction, an employee at TechSavvy was deceived into transferring over USD 10 million, convinced by what appeared to be a direct video call from the CEO, Martin Cachuck. However, the caller was not the real CEO but a scammer using sophisticated deepfake technology to convincingly mimic Cachuck's appearance, voice, and mannerisms. This alarming breach exposed the risks associated with advanced AI technologies that can be weaponized to exploit trust and subvert security protocols.

Deepfake technology, which uses neural networks to replicate realistic video and audio, has grown increasingly powerful, presenting both opportunities and risks for companies. On the positive side, AI-driven technologies enable businesses to personalize consumer experiences, creating marketing campaigns that feel tailored and relevant. However, the TechSavvy incident underscores the dark side of this technology: Its potential for misuse in impersonation, fraud, and identity theft.

The fallout of the deepfake attack was extensive. TechSavvy faced significant financial loss, and the incident forced the company to re-evaluate its security protocols, leading to the introduction of stricter verification processes, particularly for high-stakes transactions. Beyond financial impacts, the event stirred serious ethical concerns around AI use, particularly in marketing, where manipulating consumer trust could lead to reputational damage. It highlighted the need for ethical governance and cybersecurity protocols to support responsible AI use and safeguard consumer trust.

**DISCUSSION QUESTIONS**

- 1 What ethical considerations should companies address when integrating AI-driven technologies, like deepfakes, in their operations and marketing strategies?
- 2 How might TechSavvy Ltd. have prevented this scam? What proactive measures can companies implement to protect against such sophisticated AI-driven scams?
- 3 Given the potential for AI misuse, how can companies balance the desire for innovation with the need to maintain consumer trust and prioritize data security?
- 4 What role should government and industry regulations play in establishing guidelines or legal standards for ethical AI use and security protocols in corporate settings?

## **AI'S IMPACT ON MARKETING PROFESSIONALS, EDUCATORS, AND CONSUMERS**

The integration of AI into marketing marks a paradigm shift from traditional, intuition-based strategies to data-driven decision-making. This evolution creates a tension between the precision of AI insights and the established practice of relying on human intuition and experience. Balancing these elements is crucial for crafting marketing strategies that are both innovative and resonant with consumers. AI-driven insights offer unparalleled accuracy, analyzing vast datasets to uncover trends and patterns that might escape human marketers. This transformation not only reshapes marketing strategies but also redefines the skills needed by marketing professionals and the curriculum in marketing education to prepare for an AI-driven future.

### **Synergizing AI with Traditional Marketing Intuition**

AI's predictive power enhances decision-making, targeting, and personalization, enabling more effective and efficient marketing campaigns. However, traditional marketing intuition, developed through experience and an understanding of human psychology, provides unique insights that AI alone cannot replicate. This intuition allows marketers to anticipate shifts in consumer preferences, understand subtleties of brand perception, and create compelling narratives that engage consumers emotionally. To leverage the strengths of both AI and traditional intuition, marketing professionals should aim for a synergistic approach, using AI-driven insights to inform and supplement human decision-making rather than replace it. By interpreting AI-generated data through industry knowledge and consumer understanding, marketers can ensure that strategies remain grounded in human experience and empathy.

### **Evolving Skill Sets for Marketing Professionals and Educational Implications**

As AI automates many traditional marketing tasks, the role of marketing professionals shifts toward more strategic and analytical functions. Educators must incorporate AI tools and techniques into their curriculum to prepare students for this changing landscape. Learning to use AI for consumer segmentation, personalized marketing, and predictive analytics will be essential. Meanwhile, practitioners must stay updated on the latest AI developments to leverage these tools effectively. Future marketing professionals will need data analysis, AI tool management, and strategic decision-making skills to become adept at interpreting AI-generated insights and integrating them into broader marketing strategies.

### **Changing Consumer Expectations and Interactions with AI**

AI is transforming the back-end processes of marketing and reshaping consumer expectations and interactions. Tools such as AI-powered chatbots facilitate personalized,

real-time interactions, meeting consumers' demands for immediacy and relevance. Advanced chatbots, which can understand natural language and anticipate customer needs, provide real-time assistance that reduces response times and enhances satisfaction (Arasu et al., 2020). Educators should explore how AI influences consumer decision-making, including responses to AI-driven recommendations and personalized content. Practitioners, on the other hand, need to focus on creating seamless and meaningful interactions across digital platforms, using AI to foster customer satisfaction and loyalty. As Teja (2023) points out, AI-powered chatbots are increasingly common, efficiently addressing inquiries and enhancing customer experiences through intuitive interfaces.

## Preparing Future Professionals for an AI-driven Marketplace

As AI-driven marketing becomes more prevalent, educators and industry leaders need to equip future professionals with the skills and ethical understanding necessary to navigate these complexities. This includes fostering a critical perspective on AI's impact on consumer behavior, data privacy, and potential biases in AI systems (Kumar & Suthar, 2024). Engaging students in discussions around these ethical issues will help them develop a balanced view that integrates innovation with responsibility, ensuring that the future of marketing remains both effective and principled.

### CASE STUDY 9.2

#### The Trust Dilemma: Accuracy and Quality Concerns in AI-driven Customer Service

In 2024, BrightRetail, a global retail leader, experienced a major backlash due to inaccurate and misleading responses from its AI-driven customer service chatbots. Customers, relying on these chatbots for information on product availability, pricing, and policies, encountered numerous issues, including conflicting and incorrect answers. This case emphasizes the ethical and operational challenges businesses face as they increasingly depend on AI for customer interactions.

BrightRetail implemented AI chatbots across its digital platforms to improve customer experience, promising instant support, 24/7 availability, and efficient service. However, by fully automating its customer service, the company placed significant trust in AI systems without adequate human oversight. When the chatbots began providing erroneous information, frustrated customers turned to social media, sparking a PR crisis that led to a 15% drop in BrightRetail's stock price and damage to its reputation.

The investigation revealed that the chatbots relied on outdated data, which caused them to develop inaccurate response patterns. BrightRetail suspended the AI service temporarily, issued an apology, and reintroduced human oversight to ensure better accuracy in customer support. The incident highlighted the potential for AI errors to erode customer trust, damage brand reputation, and raise ethical questions about the reliability of AI systems.

### DISCUSSION QUESTIONS

- 1 What ethical responsibilities do companies have in ensuring the accuracy and reliability of AI-driven customer service systems?
- 2 How could BrightRetail have better managed its AI chatbot implementation to prevent such issues? What protocols should companies establish for monitoring AI systems?
- 3 How does relying on AI for customer service impact the relationship between companies and their customers, especially regarding trust and accountability?
- 4 What role should regulations play in governing the use of AI in customer service, and how might regulatory frameworks help prevent similar incidents?

## CHAPTER SUMMARY

This chapter has explored the transformative impact of AI on consumer behavior, highlighting key areas such as predictive analytics, personalization, customization, and sentiment analysis. Through detailed case studies and practical examples, we have illustrated how AI is reshaping traditional consumer behavior models such as Maslow's hierarchy of needs, consumer personality, self-image, self-concept, and consumer decision-making and marketing strategies.

As AI continues to evolve, its integration into consumer behavior studies will become increasingly essential. Looking forward, the future of consumer behavior in an AI-driven world promises exciting developments and challenges. Emerging trends such as enhanced predictive modeling, ethical considerations in data usage, and advanced personalization will redefine how marketers engage with consumers. This forward-looking perspective ensures that marketers are well-prepared to navigate and leverage the dynamic interplay between AI and consumer behavior.

### KEY TERMS

- **Attitude:** A learned tendency to consistently react positively or negatively toward something in our surroundings.

- **Consumer Decision-making:** The process by which individuals recognize a need, search for information, evaluate alternatives, make a purchase, and reflect on their satisfaction post-purchase.
- **Ethical Marketing:** Conducting marketing practices that are honest, transparent, and socially responsible, ensuring fairness and respect for consumer rights.
- **Machine Learning:** A method of data analysis that allows a system to learn over time by analyzing patterns from prior experience.
- **Perception:** The process of becoming aware of, organizing, and interpreting sensory information received from our senses, such as sight, smell, taste, hearing, and touch.
- **Personalization:** The application of AI to create tailored marketing messages, product recommendations, and customer experiences based on individual consumer data.
- **Personality:** The deep psychological traits that influence and mirror consumers' thoughts and actions, including unique qualities, attributes, and behaviors that distinguish one person from another.
- **Self-concept:** The collection of thoughts and emotions we associate with ourselves.

## DISCUSSION QUESTIONS

- 1 How do AI-generated marketing strategies compare to traditional methods? Assess them in terms of effectiveness, efficiency, accuracy, quality, or other characteristics.
- 2 What are the potential biases in AI-driven consumer behavior analysis, and how can they be addressed?
- 3 How does AI personalization affect consumer trust and loyalty?
- 4 In what ways can AI enhance consumer segmentation and targeting?
- 5 What ethical considerations should marketers keep in mind when using AI?
- 6 How can marketers ensure that the data used for AI is representative and unbiased?
- 7 What are the implications of AI-driven predictive analytics for consumer privacy?
- 8 How can AI tools improve consumer engagement without infringing on privacy?
- 9 What are the challenges of integrating AI into existing marketing frameworks?
- 10 How can educators effectively teach the complexities of AI in consumer behavior?



**TABLE 9.1** AI and Online Resources

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>Synerise</b>	<a href="http://www.synerise.com/">www.synerise.com/</a>	Synerise's AI Growth Cloud is a business intelligence ecosystem that leverages AI algorithms to monitor and analyze consumer experiences across various touchpoints. It integrates with websites, systems, and social media to provide insights into customer behavior, aiding in personalized marketing and sales strategies.
<b>Qloo</b>	<a href="http://www.qloo.com/">www.qloo.com/</a>	Qloo utilizes AI to understand cultural correlations and consumer preferences across domains such as music, film, television, dining, and fashion. It offers an API that businesses can use to gain insights into consumer tastes, enhancing personalized recommendations and marketing efforts.
<b>Simporter</b>	<a href="https://simporter.com/">https://simporter.com/</a>	Simporter provides AI-driven tools for market research, including trendspotting, concept creation, and consumer validation. It helps businesses predict trends and generate innovative concepts by analyzing consumer data, facilitating faster and more accurate decision-making.
<b>Speak Ai</b>	<a href="https://speakai.co/">https://speakai.co/</a>	Speak Ai is an AI-based market research tool that specializes in converting unstructured audio and video feedback into actionable consumer insights through natural language processing. It processes consumer interviews, digital recordings, and focus groups to provide valuable data for understanding customer behavior.
<b>MonkeyLearn</b>	<a href="http://www.medallia.com/platform/text-analytics/">www.medallia.com/platform/text-analytics/</a>	MonkeyLearn is a text analysis platform that uses AI for sentiment analysis, keyword extraction, and topic classification. It's helpful in understanding consumer opinions, feedback, and social media sentiments, aiding in the analysis of customer behavior.
<b>RapidMiner</b>	<a href="https://altair.com/altair-rapidminer">https://altair.com/altair-rapidminer</a>	RapidMiner is an integrated data science platform for data preparation, machine learning, and predictive analytics without the need for coding. It assists in analyzing consumer data to derive actionable insights, supporting consumer behavior analysis.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



**FIGURE 9.2** QR Code to Online Support Material

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# AI in Consumer Insights

*Brooke M. Reavey*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Identify and recall the various applications of AI in marketing research, including chatbots, AI assistants, and AI-driven consumer insights.
- 2 Explain how AI enhances traditional research methods and contributes to more effective market segmentation and targeting.
- 3 Demonstrate the integration of AI technologies into traditional marketing research practices through real-world case studies and practitioner interviews.
- 4 Compare and contrast the use of AI-powered tools in managing institutional knowledge within marketing research.
- 5 Discuss the ethical considerations surrounding AI usage in marketing research and develop guidelines for responsible implementation.

## AI IN CONSUMER INSIGHTS

Integrating AI into marketing research and data analytics gives businesses a competitive edge in the modern marketing era. While AI tools are still relatively “new” to many companies, many managers are determining their limitations for use. Many reporters say AI is the next and most explosive revolution since the Industrial Revolution (Cook, 2023). AI’s ability to process vast amounts of data, uncover hidden patterns, and provide actionable insights has revolutionized how marketers understand their customers, develop strategies, and measure success. This chapter explores the transformative role of AI in marketing research, highlighting its applications in data collection, customer segmentation, predictive analytics, sentiment analysis, and the automation of routine tasks. Data was collected

from a literature review on the topic and through interviews with working professionals in the marketing research industry.

## OVERVIEW OF AI IN MARKETING RESEARCH

A range of studies have explored the use of AI in marketing research and analytics. Vlačić and colleagues (2021) and Ziakis and Vlachopoulou (2023) provide comprehensive reviews of the field, identifying key trends and future directions. Chintalapati and Pandey (2021) and Ljepava (2022) focus on specific applications of AI in marketing, such as integrated digital marketing and marketing decision-making. Previous research finds that AI creates economic value by enhancing employee skills (Griva et al., 2022) and identifying areas for marketing sustainability (Zechiel et al., 2024). One could argue that AI is altering the marketing landscape more than any other business area.

It is well known that AI is revolutionizing data collection and analysis. Traditional methods, such as surveys and focus groups, are often limited by money, scope, and time constraints. In contrast, AI enables the rapid and efficient collection of extensive data from various sources. Techniques like web scraping, social media monitoring, and natural language processing (NLP) allow marketers to gather real-time data from online interactions, customer reviews, and social media platforms. However, research has discovered that many of these social listening tools are less accurate than human detection, which might change as the technology advances (Hayes et al., 2020).

Moreover, AI-powered tools streamline data cleaning and processing, ensuring the collected data is accurate, relevant, and ready for analysis (Mahdavi et al., 2019). Machine learning algorithms can automatically identify and correct anomalies, fill in missing values, and categorize unstructured data, significantly reducing the manual effort involved in data preparation (Oluwaseye et al., 2022). Additionally, the use of synthetic data—data that is created by AI after a few characteristics trained it—is being utilized for money and time-starved businesses that need insights (even if they are only 50% accurate). Synthetic data also helps companies that have a difficult time finding consumers to participate in their studies or stigmatized industries (Ritson, 2024).

Customer segmentation and personalization are critical to delivering targeted marketing experiences. AI excels in analyzing customer data to uncover patterns and trends that traditional methods might miss. Advanced machine learning algorithms enable marketers to segment their audience based on behaviors, preferences, demographics, and other relevant factors. Beyond segmentation, AI enhances personalization by predicting customer preferences and behaviors (Babatunde et al., 2024). AI-driven recommendation engines analyze past purchase history, browsing behavior, and other data points to suggest products or services tailored to each customer's unique needs (Chandra et al., 2022). This level of personalization not only boosts customer satisfaction but also drives higher engagement and conversion rates.

AI's impact on predictive analytics is immense. Many data scientists believe that generative AI can help to identify patterns that are indistinguishable by human marketing managers (Walch, 2020). AI can forecast future trends, customer behaviors, and market



conditions by analyzing historical data (Walch, 2020). Machine learning models predict customer lifetime value, churn rates, and the likelihood of specific actions, such as purchasing or responding to a marketing campaign (Rathi & Ravi, 2017). These predictive insights enable marketers to make data-driven decisions, optimize strategies, and allocate resources more effectively. For instance, AI can help determine the optimal time to launch an email campaign (i.e., MailChimp's AI), identify high-potential customer segments, and anticipate market shifts that could affect business performance (Needle, 2024).

Understanding customer sentiment is essential for developing effective marketing strategies and maintaining a positive brand image. AI-powered sentiment analysis tools utilize NLP to analyze text data from customer reviews, social media posts, and other online content, gauging public opinion and sentiment toward a brand or product (Haleem et al., 2022). By continuously monitoring sentiment, marketers can identify potential issues early, respond to negative feedback promptly, and adapt their strategies to meet customer needs better (Rambocas & Pacheco, 2018). This proactive approach to managing customer sentiment enhances brand reputation and fosters stronger customer relationships.

AI also plays a crucial role in automating routine marketing tasks, allowing marketers to focus on more strategic activities. AI-driven chatbots handle customer inquiries, provide support, and guide users through buying, ensuring 24/7 customer service and lead nurturing. Furthermore, AI automates content generation, email marketing, and ad placement, optimizing these processes for efficiency and effectiveness. Platforms like Hubspot offer AI assistants to help with these marketing activities. For example, AI algorithms can create personalized email content, schedule social media posts for optimal engagement, and adjust ad bids for the best return on investment (Hubspot, 2024).

Integrating AI into marketing research and data analytics has revolutionized the industry, enabling businesses to gain deeper insights, predict future trends, and deliver personalized experiences at scale. As AI technology evolves, its role in marketing research will grow, driving innovation and helping businesses stay ahead in an increasingly data-driven world.

The remainder of the chapter is organized as follows: First, there is a section about AI chatbots and assistants. Readers will have the opportunity to create their own customized AI Chatbot. Readers will learn what types of information are necessary to train the Chatbot. Second, there is a section about AI-powered segmentation practices. Readers will have the opportunity to generate a fictitious dataset for use in a segmentation study. Third, readers will explore AI and personalization. Profitable digital marketing and email campaigns require a hyper-focus on personalization and nano segments. Readers will have the opportunity to refine a segmentation from three segments to ten and discuss the strengths and weaknesses of creating smaller segments. Finally, readers will explore ethical considerations regarding AI and consumer insights.

## **AI CHATBOTS AND ASSISTANTS**

Chatbots and AI assistants have become indispensable tools for businesses and organizations. These AI-driven technologies enhance customer service, streamline operations, and



preserve and manage institutional knowledge. This section explores how chatbots and AI assistants contribute to retaining and utilizing valuable organizational information, ensuring continuity and efficiency in a rapidly changing business environment.

AI-driven chatbots are some of the oldest interactions that consumers have with AI. For instance, Clippy, the talking paperclip integrated into Microsoft Office '97, helped answer questions for Office users until 2007, when it was discontinued (Rossen, 2023). Some liked Clippy, though many hated it, which is why it was discontinued. However, despite consumers' mixed reactions toward Clippy, many welcome using chatbots in service encounters—particularly with fashion brands (Myin & Watchravesringkan, 2024). Chatbots are known to boost a firm's stock price when its adoption is announced to shareholders (Fotheringham & Wiles, 2023). They can also boost the sales of brands depending on the level of matched personalities between the user and the chatbot (Jin & Eastin, 2023). However, little is known in the academic literature about chatbots and their function in consumer insights. One way that chatbots are used is through AI assistants that help manage consumer insights data and are trained as marketing researchers.

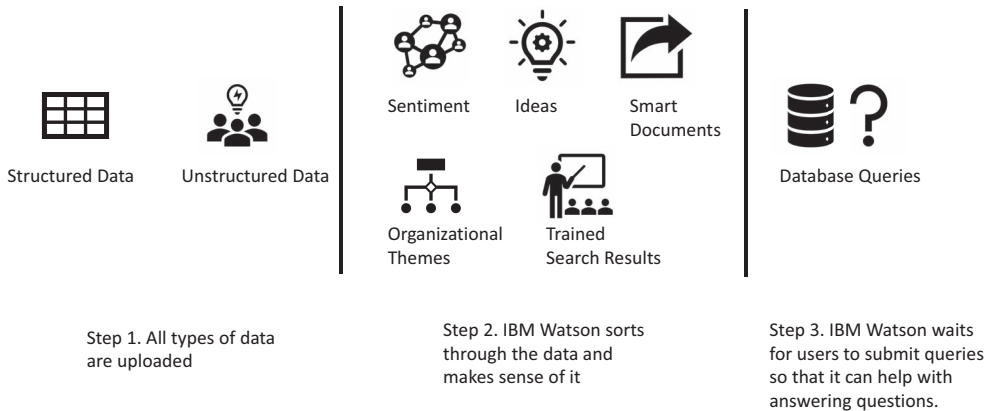
For instance, the firm Lucy is a software as a service (SaaS) company that uses a chatbot and an AI assistant to sort through the treasure trove of reports and findings from previous marketing research studies. Institutional stability via knowledge transfer is one of the key areas where AI is helping in consumer insights. In the past, most of this knowledge was stored in someone's head or was in convoluted lists. Employees who leave the company "take" the mental map, timeline, and key findings from previous projects and ad hoc studies. On the other hand, Lucy is trained to go through all of the information in a digital drive and help answer questions quickly and efficiently. IBM has a similar assistant, Cognos, that is trained as a general expert, mostly in analytics. IBM's Watson Discovery, on the other hand, is similar to Lucy in that it can assist with reading files and making sense of them. See Figure 10.1 for a high-level overview of how it sorts through the files and helps the researcher. One main difference between the IBM product assistants and Lucy is that Lucy is trained as a marketing research expert. According to Karen Kraft, Associate Director of Consumer Insights, North America for Johnsonville,

I brought Lucy, an AI knowledge management system, onboard at Johnsonville. It allowed us to create an easily searchable knowledge base of insights across consumer, customer and product insights that is accessed directly by both the various insights teams across the company and by marketing, innovation, R&D, and sales teams. Lucy has helped save the insights teams' time and fostered broader use of insights throughout the company. We're finally using all the information we have.

(K. Kraft, personal communication, May 28, 2024)

The AI assistant helps decrease the bottleneck of information requests that typically occur in marketing insights departments. Kraft and her team can help train others in different departments to work with Lucy to pull information to answer their department's questions, which allows for the democratization of marketing research and utilizing all of the secondary research stored within the organization, often reducing costs associated with primary research. Having all the data and requests stored within Lucy also reduces the number of redundant projects running across the organization. Similarly, Cognos runs the

analytic requests for multiple people across the organization. It offers reports already run by someone in the organization to the new requester. This adds value to the organization so they know who else is using the information stored inside Cognos. Table 10.1 provides an overview of the costs associated with Lucy and Cognos and other AI tools in this chapter.



**FIGURE 10.1** Structural Overview of an AI Assistant: IBM's Watson Discovery

(Source: <https://developer.ibm.com/learningpaths/get-started-watson-discovery/introduction-watson-discovery/>)

**TABLE 10.1** AI Marketing Research and Analytics Tools for Use in the Classroom

Software Name	Software Type	Trial Time	Aligns with . . .	Link
IBM Cognos	Analytics AI assistant	30 days	Marketing analytics	<a href="http://www.ibm.com/products/cognos-analytics">www.ibm.com/products/cognos-analytics</a>
Lucy	AI assistant	Demo only	Database marketing/CRM	<a href="http://www.lucy.ai/">www.lucy.ai/</a>
MailChimp	Email AI assistant	Paid monthly subscription for AI use; free account for basic email	Email marketing	<a href="http://www.mailchimp.com">www.mailchimp.com</a>
ChatFuel	Chatbot creator	Free for 30 days	Webpage creation	<a href="http://www.chatfuel.com">www.chatfuel.com</a>
Chatrace	Chatbot creator	Basic version is free up to 100 messages	Webpage creation	<a href="http://www.chatrace.com">www.chatrace.com</a>
IBM Watson	AI assistant	Free trial	Marketing analytics	<a href="http://www.ibm.com/watson">www.ibm.com/watson</a>

Beyond these operational benefits, chatbots and AI assistants serve as repositories and disseminators of institutional knowledge. More colloquially, AI assistants are similar to Amazon's Alexa and Apple's Siri (Maedche et al., 2019). However, AI assistants help users sort through stored data in the consumer insights and analytics industry. Institutional knowledge encompasses the collective expertise, experiences, and information an organization accumulates over time (Sabharwal, 2021). This knowledge is critical for maintaining operational efficiency, fostering innovation, and ensuring continuity during staff transitions. However, organizations often face challenges preserving and transferring this knowledge, especially when key employees leave or retire. AI assistants address this challenge by capturing and codifying institutional knowledge in accessible digital formats. AI assistants can be programmed to document and store information on processes, best practices, and historical data. They can log interactions, track problem resolutions, and compile databases of frequently encountered issues and solutions. This centralized knowledge base ensures that important information is not lost and can be easily retrieved by current and future employees. By serving as a digital memory bank, AI assistants help maintain continuity and prevent the loss of critical organizational insights (Maedche et al., 2019).

Conversely, chatbots enhance the accessibility of institutional knowledge by providing instant, on-demand support to employees. Employees can turn to chatbots for immediate assistance when faced with a question or challenge, accessing the organization's collective wisdom. This real-time support is especially valuable in large organizations where locating the correct information or expert can be time-consuming. Chatbots streamline this process, delivering accurate information swiftly and efficiently. For instance, one of the world's largest consumer insights and analytics firms—Ipsos—uses an internal chatbot named InnoExplorer to improve the research experience for employees and customers (Roman Herrera, 2024). The marketing literature finds that consumers believe AI chatbots do not have a nefarious intent when delivering information. Thus, employees in other departments might find that news about a marketing campaign that did not do well is best delivered by an AI assistant or chatbot (Garvey et al., 2023).

Conversely, if the chatbot was directed to speak to customers, it is possible that the customers would be more curt when asking the chatbot for more information (Luo et al., 2019). Marketing managers will have to train employees well when using AI assistants and chatbots to help them answer their marketing questions. The more the employees interact with AI assistants, like Lucy or Watson, the better they will understand the prompts necessary to execute the command that helps them.

In addition to preserving and disseminating knowledge, chatbots and AI assistants facilitate ongoing learning and development within organizations. They can be integrated with training programs, offering personalized learning experiences and reinforcing knowledge through interactive sessions. For instance, new employees can use chatbots to familiarize themselves with company policies, procedures, and tools, ensuring a smoother onboarding process. Similarly, AI assistants can continuously train existing employees, helping them stay updated with the latest developments and best practices.

### Application 10.1 Chatbots and AI Assistants

AI chatbots can be used to conduct marketing research and design a chatbot survey. AI chatbots are increasingly used to collect data efficiently and interactively. They can engage users in real-time, leading to higher response rates and more detailed feedback.

Use a chatbot development platform such as Chatfuel and Chatrace (both offer free trials). Log in to Chatfuel or Chatrace and explore its interface. Set up a welcome message and introduce the survey to your respondents. Make it clear and engaging. Write a quick series of survey questions.

Now, test your bot and see how it interacts.

#### Discuss

- 1 What did you find easy or challenging about creating a chatbot survey?
- 2 How do you think chatbots can improve data collection in marketing research?
- 3 Can you think of other innovative uses for chatbots in marketing research?

## INTEGRATION OF AI INTO TRADITIONAL RESEARCH METHODS

AI is revolutionizing traditional marketing research by enhancing data collection. This helps researchers gain deeper insights, improve accuracy, and make more efficient data-driven decisions. Traditional methods like surveys, focus groups, and interviews are often time-consuming and labor-intensive. AI, however, automates and accelerates these processes. For instance, AI-powered tools can conduct online surveys and analyze real-time responses, providing immediate insights. Additionally, AI can scrape data from social media platforms, online forums, and other digital sources, capturing a wealth of information that would be difficult and time-consuming to gather manually (Babatunde et al., 2024). This ability to quickly and accurately process large volumes of data allows researchers to stay current with trends and consumer sentiments (Rambocas & Pacheco, 2018).

AI also enhances data analysis, a crucial aspect of traditional marketing research (Buckley, 2023). Machine learning algorithms can more efficiently process and analyze complex data sets than human analysts. These algorithms can identify patterns and correlations within the data that might not be apparent to humans looking at the data (Walch, 2020). For instance, AI can segment customers based on various factors, such as occasion usage, purchasing behavior, online activity, and demographic information (Huang & Rust, 2021).

Additionally, AI can help speed up data collection and analysis by using synthetic data. One example of segmentation usage from an interview conducted by the author is from Yogesh Chavda, founder of Y2S Consulting. Chavda discusses how custom ChatGPT tools can help with segmentation, particularly for hard-to-reach consumers. He said,

For example, one of my clients was facing a critical situation where the business was declining significantly and there was immense pressure to have a turnaround plan from

leadership. If this team had approached the traditional Market Research approach, they would have commissioned a market research vendor to execute a segmentation study, and possibly even multiple rounds of qualitative research to figure out which consumers they were losing and why they were losing them, they would have needed the segmentation study to assess who they needed to target with their existing portfolio. Time was of the essence in this case. Had they conducted all this research, it could have taken a minimum of 3–6 months to get a robust segmentation study in place. Instead, I ran a segmentation analysis using one my custom GPT tools that included a clear description of the segment profile, their attitudes, behaviors, and mindset. I also included a clear description of the persona for each segment which I shared as a 1–2 minute video using a text-to-video AI tool. All of this work was developed in 48 hours and shared with the client for their review and inputs. Of course, the client was fully aware that this analysis was conducted using Gen AI tools, and that there was a risk that the solutions could be wrong. . . . So far, we've not found anything that made us question the results. This is an amazing use case that demonstrates the value of custom GPT tools.

(Y. Chavda, personal communication, May 27, 2024)

Sentiment analysis is another area where AI is transforming traditional marketing research. By utilizing NLP, AI can analyze text data from customer reviews, social media posts, and other online content to determine the sentiment behind the words (Rambocas & Pacheco, 2018). This capability allows marketers to gauge public opinion about their brand, products, or services in real time. Understanding whether the sentiment is positive, negative, or neutral helps businesses adjust their marketing strategies and respond to consumer needs more effectively. However, some find that human intervention for sentiment analysis is much more accurate. Thus, researchers should heed caution when using online tools that are not trained (Hayes et al., 2020).

Predictive analytics, powered by AI, is also becoming an integral part of traditional marketing research. Analyzing historical data, AI can predict future trends, customer behaviors, and market dynamics. Predictive models can forecast sales, customer churn, and the success of marketing campaigns, enabling marketers to make informed decisions and optimize their strategies. For example, a predictive model might identify which customers are most likely to respond to a specific marketing campaign, allowing businesses to allocate resources more efficiently and maximize marketing return on investment (ROI) (Rathi & Ravi, 2017).

AI's role in automating routine tasks is another significant benefit for traditional marketing research. Tasks such as data entry, report generation, and trend analysis can be automated using AI, freeing researchers to focus on more strategic activities (Feng et al., 2021). According to Dan Wassermann, COO of KJT, a healthcare-focused research and consulting firm, AI has helped eliminate tasks that take a lot of time. During an interview, he said,

I use it to help me code macros in VBA that will allow me to automate certain tasks for my team. I can put in 4 hours of work that will save my team 50 hours this year. It would take me 10–15 hours of work to do the same thing without ChatGPT.

(D. Wasserman, personal communication, May 24, 2024)

This automation improves efficiency and ensures that data collection is continuous and consistent because it is saved in ChatGPT's memory.

## **Application 10.2 Enhancing Traditional Marketing Research with AI**

Learn how AI tools can complement traditional marketing research methods and how AI can assist with data analysis and provide deeper insights. Traditional marketing research methods include surveys, focus groups, and observational studies.

Please use IBM Watson for this activity. Note: IBM Watson is free for 30 days at the time of writing. It is an AI tool that can analyze text data and provide insights. Log in to IBM Watson ([www.ibm.com/watson](http://www.ibm.com/watson)) and explore the platform for a couple of minutes. Using a sample dataset from a traditional marketing research method (e.g., survey responses, focus group transcripts), use the text analysis feature to identify common themes and sentiments in the responses, generate visualizations of the AI analysis, create a word cloud to show the most frequently mentioned terms and a sentiment analysis chart to display overall consumer sentiment, and interpret the analytical findings. IBM and YouTube offer several tutorials.

### **DISCUSS**

- 1 What advantages did AI offer in analyzing traditional research data?
- 2 Were there any challenges or limitations in using AI tools?
- 3 How can AI integration improve the overall effectiveness of marketing research?

## **AI-POWERED MARKET SEGMENTATION**

AI has revolutionized market segmentation and target marketing. The main reason AI has revolutionized these two aspects is its power to deal with a tremendous amount of data. Previously, customer insights professionals would have to write a survey about attitudes and behaviors toward the brand, and then after 3–6 months of data collection, analysis, and writing, they would receive the results. Conversely, AI can calculate segments in real time and combine survey results with customer behaviors (something that was not done easily in the past). These advancements have allowed businesses to operate with greater precision, efficiency, and insight.

Traditionally, market segmentation involves categorizing consumers based on broad characteristics such as demographics, geography, and buying behaviors. However, AI has enabled more granular and dynamic segmentation, leveraging data to identify patterns that human analysis might miss. To identify niche segments, machine learning algorithms analyze customer data from various sources, including social media, transaction histories, and browsing behaviors (Ziakos & Vlachopoulou, 2023). These segments are more precise and continually updated, ensuring businesses can keep up with changing consumer behaviors (Schiessl et al., 2022).

AI-driven segmentation allows for hyper-personalization, tailoring marketing messages to individual preferences and behaviors (Babatunde et al., 2024). For example,

recommendation engines, such as those used by Amazon and Netflix, use AI to analyze past behaviors and predict future actions, providing personalized suggestions that enhance user experience and drive sales. This level of personalization was unattainable before the advent of AI, marking a significant shift in how companies approach their audiences (Chandra et al., 2022).

AI's predictive analytics capabilities have transformed how marketers understand and anticipate consumer needs. By analyzing historical data, AI models can accurately predict future trends and consumer behaviors. During the interview, Yogesh Chavda, founder of Y2S Consulting, noted that

Market researchers love to make the claim that they are experts in foresight, and they tend to rely on their ability to track trends or offer concept tests as a way to capture purchase intention. With AI tools, insights professionals can now build scenario planning tools that can test future state behaviors, or better yet, create a future state segmentation that allows the insights professionals to talk about how consumer behaviors will evolve based on the predictive capabilities of AI.

(Y. Chavda, personal communication, May 27, 2024)

For instance, AI can predict which customers will likely churn, allowing businesses to implement retention strategies before losing valuable customers (Thontirawong & Chinchanachokchai, 2021). Moreover, predictive analytics can identify high-value customers and potential brand advocates, enabling targeted campaigns that maximize ROI. AI's ability to process and learn from massive datasets means that these predictions are continually refined, improving over time and adapting to new data inputs.

AI has also enhanced the effectiveness of marketing campaigns through better targeting and optimization. Programmatic advertising, which uses AI to automate the buying of ads, ensures that marketing messages reach the right audience at the right time (Tunuguntla & Hoban, 2021). AI algorithms assess real-time data to adjust bids for ad placements, targeting users who are most likely to convert (Dong et al., 2024). This level of precision not only improves campaign performance but also reduces wasted ad spend.

Moreover, AI can analyze customer feedback from multiple channels, including social media, reviews, and direct surveys. This type of analysis was nearly impossible a decade ago. Sentiment analysis tools interpret this feedback to gauge customer satisfaction and identify areas for improvement. By understanding consumer sentiment in real time, businesses can swiftly address concerns, capitalize on positive feedback, and refine their strategies to better meet customer needs.

### **Application 10.3 AI-powered Segmentation (Part 1)**

AI tools can be used for market segmentation and targeting. Let's use an AI tool to analyze a hypothetical dataset to identify segments and develop a targeted marketing strategy.

First, use ChatGPT to create a fictitious dataset unless the reader has access to a dataset from a textbook, a past research study, or from focus group transcripts.



Using the following prompt in ChatGPT, “generate a dataset I can download in Excel using the following parameters. The market is for people who use health apps. The number of observations are 150. Create open ended responses for how respondents approach maintaining their health. Each response should be unique and should vary between one sentence and three sentences.” Next, use IBM Watson to identify the three distinct customer segments. Examine the output, noting the distinct characteristics of each identified segment.

## DISCUSSION

- 1 What are the different segments you found?
- 2 If you were to give each segment names, what would they be?
- 3 What are some of the key differences between segments?

## AI AND PERSONALIZATION

AI has elevated the concept of personalization in digital marketing to unprecedented levels. The concept of personalization started with personalizing catalog content (i.e., sending only kids’ gear instead of the whole catalog), and now AI helps personalize most user experiences online. For instance, Spotify, LinkedIn, Amazon, and Temu use AI machine learning to help cater to customers’ needs and wants by personalizing their shopping experience. By leveraging machine learning algorithms, marketers can create highly personalized and targeted experiences for individual consumers. These algorithms analyze customer behavior, preferences, and past interactions to deliver tailored content, recommendations, and offers. This level of personalization enhances customer engagement and loyalty. Yogesh Chavda, founder of Y2S Consulting, offered the following example from his time at Spotify.

My first exposure to AI tools occurred at Spotify in 2017 when I had one team member working on the Wrapped Playlist. She was responsible for leading a cross-functional team to deliver the Wrapped playlist by the first week of December. While she worked on that workstream, I was leading a separate effort to improve retention rates for the free platform on Spotify. We analyzed 26 million users’ data over a 12-month period to understand specific user behaviors that could lead to higher retention rates. This is where my background in insights helped identify specific behaviors, from the day a new user downloaded the App all the way through the end of Month 1. Categorizing user behaviors and identifying those specific trigger points led to the development of an email campaign that would nudge users to continue using the App.

(Y. Chavda, personal communication, May 27, 2024)

AI has significantly transformed the marketing landscape due to its precision in targeting consumers. For instance, even though consumers say they do not want to share their data with companies, their behavior indicates something entirely different.



Personalization in marketing involves tailoring messages and offers to individual consumers based on their preferences, behaviors, and needs. Traditional marketing approaches often rely on broad demographic data, providing only a superficial audience understanding. AI, however, leverages vast amounts of data from various sources, including browsing history, purchase patterns, social media activity, and even real-time interactions. By analyzing this data, AI algorithms can discern intricate patterns and insights that enable marketers to craft highly personalized messages (Chandra et al., 2022).

One of the key ways AI enhances personalization is through recommendation systems. These systems analyze past behavior and preferences to suggest products or content most relevant to each consumer. Platforms like Amazon and Netflix use AI-driven recommendation engines to provide personalized product and content suggestions, significantly enhancing user engagement and satisfaction. AI also enables dynamic content personalization, where marketing messages are tailored in real time based on user interactions. For example, AI can customize email content, website experiences, and digital ads to match each user's specific preferences. This dynamic approach ensures consumers receive the most relevant and appealing content, leading to higher engagement rates. For instance, when users log in, an e-commerce website can display personalized product recommendations and offers, creating a more engaging and relevant shopping experience.

From a customer insights perspective, AI is used in data collection regarding open ends. One of the problems with open-ended questions in a survey is that there can be no probing of the data or examples that the customer provides. For example, sometimes the customer says something very poignant, but there is no follow-up in the way the survey is written. However, using AI-driven moderated open ends, like the software used with Quester, allows for probing while the customer writes their responses. Karen Kraft, Associate Director of North America Consumer Insights at Johnsonville, states,

Quester open ends have been incredibly helpful when really trying to understand occasions and jobs for low incidence or highly fractured categories where just a few qualitative interviews wouldn't begin to cover the breadth of occasions, such as snacking. . . . Similar previous studies on sausage at breakfast and dinner were narrow enough that we could combine our institutional knowledge and one-on-one in-home/shop-along interviews to cover the space. Since we didn't really have existing snacking products and no previous research in this area, we were starting from scratch and needed to cover a lot of potential occasions quickly.

(K. Kraft, personal communication, May 28, 2024)

The personalized moderation of these open ends allowed Johnsonville to learn more about its customers' behaviors and attitudes in hard-to-reach customer profiles.

Moreover, AI plays a crucial role in A/B testing and campaign optimization. AI can quickly identify the most effective approaches by automating the testing of different marketing messages, visuals, and strategies. Google Ads uses AI to help with A/B testing for their text ads. This continuous optimization ensures that marketing campaigns align with consumer preferences and behaviors, leading to better outcomes.

### **Application 10.4 AI-powered Targeting/Personalization (Part 2)**

Learn how to create nano segments and develop target market strategies for each nano segment. Using the dataset from Part 1, break the three segments into more segments—approximately ten nano segments. Run the AI tool to identify ten distinct customer segments. Examine the output, noting the distinct characteristics of each identified segment. Be sure to name each segment. Once segments are identified, write email subject lines that appeal to each segment.

## **ETHICAL CONSIDERATIONS IN AI-DRIVEN CUSTOMER INSIGHTS AND DATA ANALYTICS**

Integrating AI in customer insights and data analytics challenges the perception of the “right” and “wrong” way of conducting marketing responsibly. This technological advancement brings forth significant ethical considerations that must be addressed to ensure responsible and fair use.

One of the primary ethical issues in using AI for marketing research is the potential invasion of privacy. AI systems can process vast amounts of personal data, including purchasing behaviors, online activities, and social media interactions. This capability raises concerns about how individuals’ privacy is respected. The European Union’s General Data Protection Regulation (GDPR) is one regulatory framework aimed at protecting personal data, emphasizing the need for transparency and consent in data collection processes (Wulf & Seizov, 2024). Companies utilizing AI in marketing must adhere to regulations like GDPR to prevent unauthorized data usage and ensure individuals know how their data is used.

Additionally, AI systems are trained on historical data, which can include biases that reflect societal prejudices. AI can perpetuate and amplify these biases if not carefully managed, leading to discriminatory outcomes in marketing strategies. For instance, AI-driven advertising algorithms might inadvertently favor specific demographics over others, resulting in unequal access to information or opportunities. Addressing this issue requires implementing robust bias detection and mitigation techniques, ensuring that AI systems are fair and inclusive (Nazer et al., 2023). While many AI companies state that they are alleviating bias in their AI algorithms, consumers frequently test these claims and find numerous limitations in elevating the bias in AI algorithms.

Moreover, another ethical consideration is the transparency of AI decision-making processes. Marketing researchers and analysts often rely on complex AI models that can be difficult to interpret. This “black box” nature of AI can lead to a lack of accountability, making it challenging to understand or contest decisions made by AI systems (De Bruyn et al., 2020). Ensuring transparency involves developing explainable AI models that provide insights into how decisions are made. Additionally, establishing accountability mechanisms, such as clear documentation and regular audits, can help maintain trust and integrity in AI applications (Gupta et al., 2020).

The ethical principle of consent—where the researcher can use the data—is crucial in marketing research. There is a fine line between personalized marketing and manipulation. AI can analyze consumer data to create highly targeted advertising that can influence purchasing decisions without consumers being fully aware (Karimova & Shirkhanbeik, 2019). This raises ethical questions about the extent to which it is appropriate to use AI for persuasive marketing tactics. Ethical AI use requires obtaining informed consent from consumers, ensuring they understand how their data is used and the potential impacts on their behavior (Bergner et al., 2023).

Finally, an area that should be more often considered is that AI systems are also vulnerable to cyber-attacks and pose a security risk for consumers and businesses. Data breaches and cyber-attacks can compromise sensitive consumer information, leading to significant ethical and legal repercussions (Blessing et al., 2022). Implementing robust security measures and regularly updating AI systems to protect against vulnerabilities are essential to mitigating these risks. Moreover, companies must have contingency plans to address potential data breaches swiftly and effectively, maintaining consumer trust (Yamin et al., 2021).

## CASE STUDY 10.1

### AI Targeting Vulnerable Consumers

A company uses AI to identify and target consumers more likely to respond to high-interest loan offers. Many of these consumers are financially vulnerable and may not fully understand the terms of the loans.

#### DISCUSSION

- 1 What ethical issues are present in this scenario?
- 2 How could these issues impact the company and its customers?
- 3 What steps could the company take to address these ethical concerns?

## CHAPTER SUMMARY

Integrating AI into consumer insights offers significant benefits, equipping students with the skills to thrive in a data-driven world. The AI activities suggested provide a practical

and engaging way for readers to learn about AI and its applications in marketing research. By fostering analytical and strategic thinking and emphasizing ethical considerations, readers can navigate the complexities of AI in marketing and contribute to the field's advancement.

## KEY TERMS

- **AI assistants:** These assistants help marketers sift through all of the marketing files and institutional knowledge stored in a digital drive. The assistant can provide answers posed by a marketer by sifting through files and finding relevant examples in previous research.
- **AI chatbots:** Trained chatbots can serve as front-line service workers of all data for marketers. They are not as trained as AI assistants, but they can help find relevant files.
- **General Data Protection Regulation (GDPR):** The regulatory framework aimed at protecting personal data, emphasizing the need for transparency and consent in data collection processes.
- **Natural Language Processing (NLP):** Allows machines to process and interpret human language, simplifying text data analysis and the extraction of customer sentiment and important themes.
- **Sentiment analysis:** Using natural language processing and text analysis to identify and extract subjective information from text data, helping businesses gauge consumer emotions, opinions, and attitudes.
- **Synthetic data:** Data that is created by AI after it was trained by a few characteristics.

## DISCUSSION QUESTIONS

- 1 What role does AI play in deriving consumer insights from large datasets?
- 2 Describe how AI tools assist marketers in identifying niche markets that traditional methods might overlook.
- 3 How do AI tools differ from traditional knowledge management systems in terms of efficiency and insight generation?
- 4 In what situations might traditional knowledge management systems outperform AI-driven solutions?
- 5 Discuss ethical considerations in marketing research.

TABLE 10.2 AI and Online Resources

Resource	URL	Description
IBM Cognos	<a href="http://www.ibm.com/products/cognos-analytics">www.ibm.com/products/cognos-analytics</a>	A business intelligence software that helps marketers analyze data that is stored in shared folders.
Lucy	<a href="http://www.lucy.ai/">www.lucy.ai/</a>	Market research geared business intelligence software that helps marketers answer questions quickly by reviewing all stored documents.
MailChimp	<a href="http://www.mailchimp.com">www.mailchimp.com</a>	The AI assistant helps to write emails, analyze campaigns, and provide suggestions for improved subject lines.
ChatFuel	<a href="http://www.chatfuel.com">www.chatfuel.com</a>	An AI assistant that generates auto email messages for cart abandoners.
Chatrace	<a href="http://www.chatrace.com">www.chatrace.com</a>	A chatbot that allows marketers to chat with their customers on Facebook, Messenger, and Instagram.
IBM Watson	<a href="http://www.ibm.com/watson">www.ibm.com/watson</a>	Enterprise-level AI that assists in multiple marketing functions across the organization.

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



FIGURE 10.2 QR Code to Online Support Material

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## PART IV

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# Ethics and Education in AI

Chapter 11 offers insights and recommendations for researchers, practitioners, and policymakers who must navigate the ethics of artificial intelligence in marketing. Ethical challenges are discussed, including privacy concerns, algorithmic bias, transparency, and accountability.

Chapter 12 explores the integration of AI in marketing education. The chapter presents an AI-powered Marketing Educator framework to provide strategies, tactics, tools, and prompts to be used in the classroom, making a case for marketing educators to embrace AI, develop their own AI literacy, and, in turn, build AI literacy in students.



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# Exploring the Ethical Implications of Artificial Intelligence in Marketing

*Hanne Knight*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Discuss specific ethical implications of employing artificial intelligence in marketing.
- 2 Distinguish between opportunities and challenges that artificial intelligence in marketing brings.
- 3 Elaborate on the implication of ethical challenges for practitioners.

## INTRODUCTION

In recent years, integrating artificial intelligence (AI) into marketing strategies has transformed how companies approach personalized recommendations and targeted advertising (Davenport et al., 2021). This technological advancement, however, brings forth significant concerns regarding consumer privacy (Choi & Choi, 2023), particularly in the collection, storage, and utilization of consumer data. Research has delved into the implications of AI on consumer privacy across various contexts. For instance, Mou and Meng (2024) explored the relationship between privacy concerns and the use of AI-based intelligent voice assistants, revealing that heightened privacy worries can lead to resistance against such technologies.

A critical aspect of AI-driven marketing is the personalization paradox, which posits that while personalization can enhance marketing effectiveness, it can also trigger privacy concerns depending on the context (Aguirre et al., 2015). Consumers often weigh

the benefits of personalized offers against their privacy apprehensions. Davenport et al. (2020) raise important questions about how consumers balance these factors, considering personal and situational influences, product types, and trust in the company and how this balance may shift over time. Companies must navigate these concerns carefully, fostering ethical marketing practices and ensuring the responsible use of AI to build and maintain customer trust (Gupta et al., 2024).

Moreover, the accountability of AI systems in marketing is a crucial issue, particularly when their outputs are problematic. Although AI technologies, such as algorithms, are designed to be unbiased and data-driven, they can still reflect human biases and make unfair decisions, as they are created and trained by people using data that is generated in social settings (e.g. data derived from social media channels) (Osoba & Welser, 2017). Fairness in decision-making, defined as the absence of prejudice or favoritism based on inherent or acquired characteristics (Mehrabi et al., 2021), is essential in AI applications, including marketing.

AI's role in customer segmentation and targeting, utilizing machine learning algorithms to analyze vast data sets, offers detailed consumer insights, aiding in personalizing products and content recommendations. However, biases in these processes can lead to adverse outcomes, such as discriminatory advertising (Ali, 2021). The lack of transparency in AI algorithms, often called "black-box AI," contributes to consumer mistrust due to the opaque nature of AI decision-making processes (Meske et al., 2022, p. 53).

Additionally, the proliferation of AI-generated content complicates efforts to combat misinformation, posing challenges for social media platforms and law enforcement agencies (Knight & Vorster, 2023). Algorithmic biases in advertising can also contribute to misinformation, reinforcing echo chambers and potentially radicalizing certain demographic groups (Ali, 2021).

Finally, cultural context is vital in how users perceive and interact with AI algorithms. Most research has focused on Western contexts, but the global impact of algorithms necessitates a broader understanding of cultural influences on AI adoption and interpretation (Shin et al., 2022).

As AI continues to shape the future of marketing, examining these diverse factors is essential to address the complex interplay between technology, privacy, and consumer behavior (Davenport et al., 2020).

The chapter will examine the existing literature on the ethical implications of AI in various domains to identify critical ethical concerns in marketing such as data privacy, transparency, bias, and accountability. The chapter covers ethical issues such as misinformation and fake news and AI's role in fabricating and spreading those. Finally, cultural differences in attitudes toward AI will form the last content piece of this chapter. We will then highlight opportunities and challenges as well as implications for practitioners.

## **ETHICAL IMPLICATIONS OF AI IN MARKETING**

### **Privacy Concerns About Personalized Advertising**

One of the critical applications of AI in marketing is the use of personalized recommendations and targeted advertising (Davenport et al., 2021) and there are questions about how the use of AI impacts consumer privacy (Choi & Choi, 2023), especially when collecting,

storing, and utilizing consumer data. Consumers are concerned about protecting their privacy when collecting consumer data on the internet. People's online behavior is constantly monitored and collected to show them individually targeted advertisements, a phenomenon called online behavioral advertising (OBA) (Boerman et al., 2017). Many studies review the consumer characteristics of privacy concerns in the field of OBA (see for example, Anton et al., 2010; Baek & Mariko, 2012; Smit et al., 2014; Yang, 2013). One common concern that seems to be part of the personalized online advertisement discussion is that these advertisements are personalized based on unknowingly recorded conversations on people's smart devices. Frick et al. (2021) found that those users with little trust in smart devices, with high computer anxiety and prior negative experience, seem to perceive surveillance as exceptionally high. It seems that users are generally aware that their data is being used but with technology expanding at an incredible speed it is often unclear when and where personal data is tracked, where it is stored, with whom it is shared, and how it is used (Frick et al., 2021). Another area where privacy concerns seem to impact how consumers interact with AI applications is in the context of intelligent voice assistants. Mou and Meng (2024) reviewed artificial intelligence-based voice assistants and found that consumers with serious concerns about their privacy being invaded through AI are more resistant to using voice assistants.

Interestingly, the researchers found that the relationship between privacy concerns and consumer resistance is partially explained by perceived creepiness. Creepiness in this research was defined as a "potentially negative and uncomfortable emotional and cognitive response, mixing anxiety, fear, ambiguity, and uncertainty (Ho et al., 2008) paired with perceptions of ambiguity toward technology, a person, or even during a situation" (Mou & Meng, 2024, p. 265, Shklovski et al., 2014). Creepiness is something that users seem to perceive when technology resembles humans or other living organisms (Wozniak et al., 2021). This is the case for voice assistants and other AI-based technologies such as chatbots and self-driving cars.

It is essential to note the personalization paradox, which states that "personalization can be both an effective and ineffective marketing strategy, depending on the context" (Aguirre et al., 2015, p. 35). Customers must weigh their worries about privacy against the advantages of personalized recommendations and deals. For example, when browsing the internet for a new television, consumers would be shown personalized advertisements based on their browsing history if they allowed their browsing history to be saved. Someone who does not want their browsing history saved by search engines could opt out but would have to accept that they will not be shown any deals based on their browsing behavior. According to Davenport et al. (2020), key questions arise about how customers decide on the best balance, like which personal and situational factors might influence their choices. Does this balance change depending on what kind of product it is or how much trust the customer has in the company? Moreover, does it change as time goes on?

Many legal frameworks aim to keep people's data safe online. For example, the General Data Protection Regulations (GDPR) in Europe and the California Consumer Privacy Act of 2018 (CCPA) are some of those significant frameworks. Creating policies about data privacy involves finding a middle ground between keeping consumers' data safe and progressing the development of innovative technology. If data is not protected well enough, consumers may not adopt AI applications due to the fear of compromising data privacy. If, however, there are too many rules set out through policies, it could slow

down innovation and progress (Davenport et al., 2020). With the speed of technological development, frameworks such as the GDPR and the CCPA will have to be reviewed for their effectiveness in safeguarding privacy in the light of applying AI in marketing. The lack of comprehensive legal requirements concerning data privacy requires a commitment to responsible data handling by those collecting the data.

## CASE STUDY 11.1

### Target: Personalized Advertising

It is commonplace for retailers to collect data about customers' buying behavior—both online and in-store—to develop personalized product and service offers. Masses of data are being produced and collected on numerous platforms—both through digital and offline channels. Data is generated, whether it is liking a picture online, making a comment, or using a loyalty or credit card in stores. Some claim that data is “the new oil” (Ferm et al., 2023), and some companies do not offer any product or service besides data (e.g. Meta).

Usually, greater personalization increases customer adoption. However, the Personalization Paradox shows that too much personalization may increase customers' sense of vulnerability and lower adoption rate (Aguirre et al., 2015). This case study reviews a case where the application of artificial intelligence technology allowed for too much personalization.

Target is a US-based retailer that was founded in 1962 and, since 2018, has stores in all of the 50 states of America (Target, 2024). Target and other retailers collect consumer data whenever possible. In the case of Target, every shopper is assigned a unique code, the Guest ID number (Duhigg, 2012). All in-store transactions (e.g., using a credit card, asking for a refund, using a coupon) or online (e.g., opening an email or visiting the website) are linked to this Guest ID number. Duhigg (2012) states in the *New York Times Magazine* that the data collected by Target includes the following:

- Demographic information like age, marital status, neighborhood, distance to the store, and salary
- Credit card ownership
- Browsing history

In addition to the collected data, Duhigg (2012) further states that Target can buy data about their customers' ethnicity, job and financial history, home ownership information, education history, topics that consumers engage with online, brand preferences, political views, donation behavior, and much more. This quantity of data allows analytical teams to understand consumers' shopping habits and their habits. Knowing consumers' habits is important as habits are powerful indicators of people's decisions and behaviors (Allen, 2019; Verhoeven et al., 2012).

In the early 2000s, Target hired an analytical team to understand the collected data better, with one of the main goals being identifying pregnant customers. This was important as pregnancy was the main time in a consumer's life when consumption patterns and habits were adjusted to suit a busy lifestyle. So, instead of people shopping in different shops based on what they have always done, Target hoped to change this behavior so that customers would see their stores as one-stop shops (Hill, 2012). The analytics team analyzed large amounts of data and found shopping patterns for consumers who seemed to be expecting. These included purchasing unscented lotions, supplements such as calcium and zinc, cotton balls, and hand sanitizers. In total, 25 products allowed the analytical team to assign each shopper a "pregnancy prediction" score, which even allowed Target to estimate the due date within a small window (Hill, 2012). Based on these scores, Target began sending coupons for baby items.

Duhigg (2012) published a story of what happened around a year after this program was implemented. A man visited a Target store in Minneapolis, demanding to see the store manager. The man was visibly angry, asking the store manager why his teenage daughter had been sent coupons about pregnancy and baby products. The store manager apologized profoundly to the man and called a few days later to apologize again. During that phone call, the father of the teenage daughter apologized and said that, apparently, he was wrong and that his daughter was indeed pregnant.

Despite its scores being correct, Target reverted somewhat on their pregnancy prediction strategy as they found that some people are uncomfortable thinking that a retail store would know that they are pregnant without them having provided that information. When asked about consumer data privacy, a spokesperson from Target said (Duhigg, 2012):

We are very conservative about compliance with all privacy laws. But even if you're following the law, you can do things where people get queasy.

### **CASE STUDY QUESTIONS:**

- 1 How did Target's use of data analytics and artificial intelligence to predict pregnancies raise privacy concerns despite being compliant with privacy laws?
- 2 What is the Personalization Paradox, and how does it illustrate the balance between personalized marketing and privacy concerns in Target's case study?
- 3 What are the ethical implications of Target's extensive data collection practices, even when no laws are broken?
- 4 In the context of the Target case study, who should be held responsible and accountable for the privacy concerns raised by the pregnancy prediction program, and what measures should be taken to address such issues?
- 5 How might the outcome of Target's pregnancy prediction program have differed if it had been implemented in a culture with stricter and more conservative views on teenage pregnancy?



## Accountability and Responsibility

Businesses need to carefully weigh the advantages of personalized marketing with the consideration of customer boundaries. Building a culture of ethical marketing practices within an organization by employing responsible use of AI technologies is crucial to enhancing customer trust (Gupta et al., 2024). Another important question about the responsibility of AI in marketing concerns the accountability of AI systems, especially when outputs go wrong. Busuioc (2020, p. 825) poses questions about the accountability of AI algorithms in public administration, such as: “What accountability challenges do AI algorithmic systems bring with them, and how can we safeguard accountability in algorithmic decision-making?” These questions are just as crucial in the marketing context, and it is essential to clarify what accountability means. Olsen (2014, p. 107) explains, “Accountability refers to being answerable to somebody else, being obligated to explain and justify action and inaction.” This raises the question of how far AI applications can be held accountable for their actions or inaction. Some scholars (e.g., Hermann, 2022) propose the application of ethical frameworks that hold AI systems and their developers responsible for unintended consequences. There are different entities in the AI accountability landscape, all of which have unique responsibilities and are listed here (Emerge Digital, 2024).

- **AI Users:** Responsibility requires understanding of the functionality and ensuring appropriate use.
- **AI Developers:** Responsibility includes the AI being designed responsibly with safety measures to prevent misuse or errors.
- **AI Vendors:** Accountable if a product is flawed or if they fail to disclose potential risks to the client.
- **Data Providers:** AI systems rely on data for training and operation, and data providers are accountable for the quality and accuracy of the data they supply.
- **Regulatory Bodies:** Tasked with protecting public and business interests and defining the legal landscape.

Businesses need to understand these responsibilities. According to the previous list, most marketers will be users of AI and, as such, are required to understand the functionality and ensure appropriate use of the technology. There are many ways in which the application of AI can go wrong, and those responsible need to be held accountable. An example of where it can go wrong is email response mismanagement (Emerge Digital, 2024). AI systems are frequently used to design automated email responses. For example, an automated response containing sensitive client information was sent to the wrong client due to a wrong search in the records. In this case, the AI user might have initiated the process, yet the AI developers might be held accountable for the deficiencies in the system’s design that allowed the error. There is no safeguarding from mistakes like the one described in the previous scenario. Researchers and practitioners are trying to understand and prevent unintended consequences of the application of AI technology, especially regarding machine learning. One unintended outcome is seen in algorithmic bias and a lack of fairness.

## Algorithmic Bias and Fairness

It is often assumed that AI technology, such as the application of algorithms, is unbiased and fair as it is a technology that is meant to operate based on data and facts rather than personal preferences. However, it must be considered that those algorithms and any other form of AI technology are developed and written by people and trained on socially generated data (e.g., data generated in a social setting such as social media data) (Osoba & Welser, 2017).

Moreover, just like humans, algorithms can make unfair decisions and are susceptible to biases. When we think of fairness in the context of decision-making, fairness is the “absence of any prejudice or favoritism toward an individual or group based on their inherent or acquired characteristics” (Mehrabi et al., 2021, p. 1). Unfair in an algorithmic context would mean that its decisions are skewed toward a particular group of people. For example, specific results or ads on a search engine are shown to only a small user group, such as a managerial job vacancy only displayed to middle-aged white males. There have been calls to examine biases embedded in AI algorithms (Chandra et al., 2023; Tilmes, 2022). Howard and Borenstein (2018) explain that bias occurs as algorithms find patterns within datasets that reflect implicit biases and, therefore, emphasize and reinforce these biases as global truth. Suresh and Guttag (2019) clarify that machine learning algorithms operate by learning patterns in historical data and generalize what is learned to unseen data. They further explain that most unintended consequences (e.g., unfair decision-making) result from biased data. It is cautioned that data is a product of many factors and outlines five primary sources of bias in machine learning (Suresh & Guttag, 2019, pp. 3–4):

- Historical bias: Historical bias arises even if the data is perfectly measured and sampled if the world as it is leads a model to produce outcomes that are not wanted.
- Representation bias: Representation bias occurs when certain parts of the input data are underrepresented.
- Measurement bias: Available, measured data are often proxies for some ideal features and labels.
- Aggregation bias: Aggregation bias arises when a one-size-fit-all model is used for groups with different conditional distributions.
- Evaluation bias: Evaluation bias occurs when the evaluation and benchmark data for an algorithm doesn’t represent the target population.

Bias based on AI can have real-life consequences, some more severe than others. Examples of such bias can be of a sexist nature. For example, search engines deliver job postings for well-paying technical jobs to men, not women (Howard & Borenstein, 2018). Or they can be of a racist nature whereby AI technology is used to judge a beauty contest and seems to favor paler over dark skin (Levin, 2016).

Several marketing applications depend on AI as machine learning algorithms, and their implications for targeted marketing are currently under-researched but require deeper understanding (Rai, 2020). Marketers can use AI when segmenting and targeting customers by utilizing machine learning algorithms that analyze large amounts of data to predict customer behavior (Ferm et al., 2023). This data analysis can result in a detailed picture of

potential consumer segments, which helps personalize products and content recommendations. However, if bias is present when building these customized recommendations, they can quickly become annoying at best and offensive at worst.

All major advertising platforms enable high correlation targeting, which leads to situations where malicious advertisers can access tools that allow discriminatory ads (Ali, 2021). Even without the advertisers' intent, some studies demonstrate ad delivery biases. For example, Ali et al. (2019) devised a set of controlled experiments to demonstrate that, despite uniform targeting criteria, adjustments made during the advertisement distribution phase (in response to ad content) can introduce biases in the gender and race of the targeted demographic. These biases are found even within legally protected ad categories like employment and housing, raising concerns about potential violations of anti-discrimination laws in the United States.

Determining how bias and unfairness can be mitigated when using AI in marketing is essential. Some scholars propose algorithm improvements (Celis et al., 2019; Joseph et al., 2016). Others suggest that understanding users regarding what type and content of advertising causes harm would be the first necessary step (Ali, 2021). Those identified values could then be implemented as constraints into algorithms and prevent users from seeing types of ads that have been identified as causing harm. Ali (2021) summarized that focusing on users when addressing bias is crucial for developing sustainable solutions. Since users are often affected by these harms, it is essential to consider their sensitivities when devising mitigations. Ali (2021) stressed the importance of shifting toward solutions prioritizing user objectives, which may lead to more meaningful outcomes than independently setting objectives. One of the main problems associated with AI technology is the lack of trust from consumers. This lack of user trust is partially due to the limited understanding of AI systems (DARPA, n.d.). One way of instilling trust is using transparent methods when developing AI technology.

## Transparency and Explainability

Many challenges are associated with the need for more transparency in AI algorithms. One such challenge is the lack of consumer trust, partially due to little understanding of why AI systems make decisions or exhibit certain behaviors (Rai, 2020). This is often termed black-box AI due to the internal learning processes and the resulting models being difficult for the user to comprehend (Meske et al., 2022).

One way of overcoming this lack of understanding is by employing explainable AI (XAI), defined as "a class of systems that provide visibility into how an AI system makes decisions and predictions and executes its action" (Rai, 2020, p. 138). To date, XAI has mainly been explored by developers in computer science (Meske et al., 2022). The Defence Advanced Research Projects Agency (DARPA) states that the Explainable AI (XAI) aims to create a suite of machine learning techniques that:

- Produce more explainable models while maintaining a high level of learning performance (prediction accuracy).
- Enable human users to understand, appropriately trust, and effectively manage the emerging generation of artificially intelligent partners.

As such, these new systems can explain their decisions, outline their capabilities and limitations, and provide insights into their future behavior (DARPA, n.d.). Some voices in the literature stress that AI needs to be explained in order for it to be fair, accountable, and trustworthy (Abdul et al., 2018; Miller, 2019). However, others caution that Explainable AI is merely one of the issues inside the human-agent interaction whereby human-agent interaction is defined as “the intersection of artificial-intelligence, social science, and human-computer interaction (HCI)” (Miller, 2019, p. 2).

One of the most central questions posed about Explainable AI is why people ask for explanations in the first place. Malle (2004) argues that people ask for explanations for two reasons. First, to find meaning or to reconcile the contradictions or inconsistencies between elements of our knowledge structures. Second, to manage social interaction, create a shared sense of something, and change others’ beliefs, impressions, emotions, or actions.

Miller (2019) confirms that with AI it is crucial to ensure that both the machine and the person understand the same thing. Often, when an AI explains something, its goal is to help itself and the person understand the decision made, at least to some extent.

The need for explainability varies between different stakeholder groups, as members can have various levels of knowledge. Potential stakeholder groups and their varying level of interest in Explainable AI are outlined here, according to Meske et al. (2022, p. 58).

- AI regulators: Interested in certification of AI systems.
- AI developers: Interested in debugging and improvement of AI systems.
- AI managers: Assuring compliance of AI systems in the organization.
- AI users: Validate AI reasoning with own reasoning.
- Individuals affected by AI-based decisions: Evaluate the fairness of decisions.

As shown in the previous list, different stakeholders are interested in various aspects and levels of explainability of AI. In the marketing context, these different stakeholder roles are mutually important to consider, as different decision domains require different levels of explainability (Rai, 2020). If AI systems are employed for highly consequential decision-making, high levels of explainability are needed for marketing professionals and customers. Marketing areas where decisions based on AI can be highly consequential are pricing decisions, promotion value, and timings of promotions (Rai, 2020). In this example, the store manager (in this case, taking on the role of AI manager and AI user) must understand how the AI system comes up with the predictions. The consumers (in this case, the individuals affected by AI-based decisions) require fewer explanations about how those decisions have been made. An area of marketing where decisions derived from AI systems could have far-reaching consequences is product recall. In this case, all the stakeholders would have a shared high interest in understanding why an AI system would recommend recalling a product. According to Rai (2020), assessing how accurate predictions are compared to the need for explanations in various marketing tasks will help marketers grasp the goals AI systems must achieve. They can then collaborate with AI developers to determine the best way to meet these goals. In the specific marketing context, Rai (2020) suggests research in this area, which could explore how trust in an AI-powered advertisement targeting system can be built using

XAI. XAI reveals why certain ads are directed at a consumer and the characteristics of the ad-targeting model.

Additionally, this research can investigate how consumer feedback about the clarity of explanations can enhance ad targeting and decrease the chance of ads being perceived as clickbait. Clickbait refers to the deliberate use of misleading headlines and thumbnails of content on the Web (Chen et al., 2015). Often, those headlines aim to increase traffic to a particular website, and more often than not, they use false information to generate such traffic. AI technologies are usually to blame for creating and spreading false information online (Repede & Brad, 2023).

## The Veracity of Misinformation

The spread of online misinformation poses a challenge for consumers and businesses (Knight & Vorster, 2023). Using AI in content creation makes it harder for social media platforms and law enforcement agencies to detect misinformation. This is because AI (e.g., language models) can produce large quantities of misinformation that are not plagiarized and, therefore, more challenging to detect (Kreps et al., 2022). Repede and Brad (2023) stress the direct impact of various AI technologies on creating and spreading misinformation and disinformation. It is essential to outline the terminology related to misinformation. Treen et al. (2020) define misinformation as relating to information that is false, inaccurate, or misleading; note that to be dishonest, the information itself need not be false but may be presented out of context. The primary distinction between misinformation and disinformation lies in the presence or absence of intent. Disinformation is specifically crafted to deceive, whereas misinformation lacks this deliberate intent. “Fake news” and fabricated or manipulated content are further terms used to describe deceiving content.

One of the problems associated with information communicated by AI is that it presents answers as facts when they are based on the information found online without regard for their correctness (Kleinman, 2023). Google learned this lesson when an advertisement showing off its new AI bot answered a question incorrectly costing the company £82bn in shares (Sherman, 2023).

There has been a growing interest in fake news in fields such as journalism, psychology, and political science, but fewer studies are set in the marketing and consumer behavior context (Di Domenico & Visentin, 2020) with some exceptions (e.g., Chen & Cheng, 2019; Peterson, 2019; Talwar et al., 2019; Visentin et al., 2019). However, the proliferation of misinformation, disinformation, and fake news significantly affects marketing from both business and consumer perspectives (Knight & Vorster, 2023).

Consumers primarily acquire information through online channels, such as social media and various websites, throughout the entire consumer journey, encompassing the pre-purchase, purchase, and post-purchase stages. During the pre-purchase stage, information search is crucial as consumers seek details about potential products, read reviews, and compare prices. Consumers continue to encounter online information in the purchase stage, particularly during e-commerce transactions. Finally, in the post-purchase stage, consumers often share their experiences with purchased products through reviews. For

each stage, misinformation and disinformation are critical for digital marketers to consider, as they can have implications for consumers' responses.

Research has shown that misinformation can have negative implications for the brand in terms of undermining brand equity (Berthon & Pitt, 2018) and consumer trust (Visentin et al., 2019). Fearon (2017) summarizes the impacts of misinformation on digital marketing activities in the following:

- Consumers' confidence in the information they encounter on digital platforms, including paid forms such as advertisements and organic forms like social media posts, has significantly eroded. This phenomenon poses a notable challenge for digital marketers seeking to effectively convey the value propositions of their products or services to consumers and influence their purchasing behaviors.
- Managing the content consumers are exposed to online presents a significant challenge for digital marketers. The juxtaposition of branded content, such as advertisements on search engines or social media platforms, with external content perceived as misinformation or fake news can detrimentally affect brands. Such associations have the potential to tarnish a brand's reputation by linking it with controversial content, thereby leading to reputational harm.
- Digital marketers face considerable pressure to develop captivating content for consumers, with the challenge being that misinformation tends to be inherently engaging. Consequently, digital marketers must continually validate the information's accuracy and authenticity.

Ali (2021) highlights the issue of algorithmic bias in advertising, where information presented to specific demographic groups is skewed, potentially exposing these groups to misinformation. This can lead to people being trapped in echo chambers. This is more prevalent in some cultures than others and requires further understanding.

## **Cultural Differences of Ethical Concerns of AI in Marketing**

Davenport et al. (2020) elaborated on how AI will change the future of marketing and called for reviewing different factors that determine customers' perceived value of AI. One such identified factor is culture. Shin et al. (2022) stress that most research on the effects of algorithms tends to be set in the Western context, even though their impact and development are crucial for everyone. Algorithms form the basis for most AI-driven decision-making, and it is argued that the different ways in which users "perceive, interpret and act towards algorithms can greatly influence their own cultural context" (Shin et al., 2022, p. 621). Earlier research investigates technology adoption across cultures rather than specific AI adoption and finds differences (Choo, 2012). The question that arises is how far ethical concerns and feelings like intrusion play a part in these differences when adopting new technology, in this case, AI. For example, Peca et al. (2016) apply an Ethical Acceptability Scale to evaluate AI adoption in the context of therapeutic robots. They ask questions about the ethical acceptability of robots, depending on whether they are more human or object-like. Results differ when further studies are reviewed around attitudes toward robots such as AI agents, specifically in different cultures. For example, a

study comparing attitudes between UK and Japanese participants found that the UK had more negative attitudes toward using robots (Nomura, 2017). Another study examining attitudes toward robots compared participants from the Netherlands, Japan, and China found that Japanese participants had the most negative attitudes (Bartneck et al., 2005). When specifically researching attitudes toward AI, Perrson et al. (2021) recently found that differences between Sweden and Japan only seem to be marginal. They interestingly used exposure to AI in popular culture as one variable, and while they found no significant correlation, there are some implications to be drawn. While cultural differences might exist, most users are exposed to similar content—our world has grown more homogenous with the internet as an information provider. As such, opportunities will be discussed next.

## OPPORTUNITIES FOR ETHICAL AI

Many benefits and opportunities are assigned to the use and application of AI, ranging from improving societal well-being to economic growth. One concept that has caught the interest of researchers and practitioners alike is that of Trustworthy AI (TAI) (European Commission, 2019). The concept establishes the idea that individuals, organizations, and societies will only see the full potential of AI if trust can be established in its development, deployment, and use, as trust builds the foundation of societies, economies, and sustainable development (Thiebes et al., 2021).

The European Commission has published guidelines on the foundations, realization, and assessment of trustworthy AI and has laid the foundation for the term trustworthy AI in other guidelines, such as the OECD principles on AI (OECD, 2019) and the White House AI principles (Vought, 2020). Given that trust is a complex concept that scholars have widely debated, it is unsurprising that defining trust in AI and determining what makes AI trustworthy is still an ongoing and widely discussed topic in both research and practice (Thiebes et al., 2021) and as such interpretations about what makes AI trustworthy varies.

The European Commission (2019, p. 7) sets out three components that should be met throughout an AI system's entire life cycle:

- 1 It should be lawful, complying with all applicable laws and regulations.
- 2 It should be ethical, ensuring adherence to ethical principles and values.
- 3 It should be robust from a technical and social perspective since AI systems can cause unintentional harm, even with good intentions.

Thiebes et al. (2021) elaborate on the five foundational principles of TAI as 1) beneficence, 2) non-maleficence, 3) autonomy, 4) justice, and 5) explicability. Great potential for the application of trustworthy AI (European Commission, 2019) has been stated as reducing humans' impact on the environment and enabling the efficient and effective use of energy and natural resources. Alternatively, the health sector provides smarter and more targeted treatments and assistance in the care sector.



TAI is very generic in its approach to encompassing all kinds of AI applications. Opportunities in more specific AI applications have been set in the algorithmic context, with several authors discussing the principles of fairness, accountability, and transparency (FAT) in the context of algorithm technologies (Diakopoulos & Koliska, 2016; Park, 2019; Shin et al., 2022; Smith, 2018; Zhong, 2020). Some of these studies have indicated that user evaluation of FAT positively affects the perceived value and acceptance of algorithmic services (e.g., Park, 2019; Zhong, 2020). The FAT principles have been coined as prerequisites to developing sustainable algorithms (Helberger, 2019). When specifically reviewing the overall opportunities for the application of AI in marketing, the advertising opportunities are the most impressive. Adaan (2023) summarizes the following opportunities that are discussed in detail in the chapter on AI and advertising:

- Precise targeting
- Ad optimization
- Data-driven insights
- Enhanced user experience
- Efficiency in campaigns
- Predictive analysis

Despite these many opportunities, challenges, especially regarding the ethical implementation of AI, remain.

## CHALLENGES OF ETHICAL AI ADOPTION

Remembering that an artificial agent is only as good as the data it learns from is essential. Arguments persist that reducing the human input when extracting data will make the process more objective (Osoba & Welser, 2017). However, generating data is a social phenomenon often gathered via social media interactions or online political discourse; therefore it is highly impacted by human biases (Osoba & Welser, 2017). This then results in teaching artificial agents to imitate the data's bias. Osoba and Welser (2017, p. 17) call this the *Paradox of Artificial Agency* describing the paradoxical effect whereby artificial agents learning from human-derived data often learn human biases.

In a marketing context, such biases resulting from data are seen in targeted advertising, where inferences about individuals can be defamatory. For example, a study by Sweeney (2013) finds statistically significant discrimination in ad delivery based on searches of 2,184 racially associated personal names. The study reviewed search results for names more often associated with a particular race. In their study, they used first names that are being assigned at birth to more black or white babies and studied ads that would be shown when googling such names. They found evidence of discrimination in online ad delivery in that a black-identifying name was 25% more likely to get an ad suggestive of an arrest record. In contrast, names assigned more frequently to white babies would show more neutral content.



While many studies focus on the benefits provided by AI in marketing, the dark side requires further attention (Grewal et al., 2021). The lack of trust has been covered earlier in this chapter but requires further discussion. In relationship marketing, the lack of trust can lead to reduced loyalty (Kingshott et al., 2018), and this is particularly important for industries perceived to be of higher personal risk, such as banking. Trust is essential when it comes to building relationships with consumers. Privacy concerns among consumers and bias evident in AI technology are some of the issues resulting in a lack of trust (Grewal et al., 2021). An interesting finding from the relationship marketing literature in the Business to Business (B2B) context demonstrates that power asymmetry is challenging. Business consumers seem to perceive AI technology as giving more power to their exchange partners (Grewal et al., 2021). One way to overcome such power asymmetry is by employing explainable AI (Rai, 2020).

Adaan (2023) summarizes the challenges of AI in marketing as:

- Privacy concerns and biases
- Manipulation of behavior
- Creativity challenges

Osoba and Welser (2017, p. 25) stress that “The error and bias risk in algorithms and AI will continue as long as artificial agents play increasingly prominent roles in our lives and remain unregulated”. This poses the question of what practitioners must consider regarding the ethics of applying AI in marketing.

## PREPARING MARKETERS FOR ETHICAL AI PRACTICES

Data privacy is one of the significant areas of concern for marketers utilizing AI technology. Tucker (2019) outlines why consumers seem to struggle with concerns for their privacy. Today, storing data is very cost-efficient, meaning businesses might retain data longer than intended. Marketers should be rigorous when following legal data storage guidelines to counteract this fear amongst consumers. As such, they should communicate their policy to elevate consumer trust. The second reason Tucker (2019) addresses is reusing data for purposes other than initially intended. Similarly to the first implications, businesses must be very clear in their communication in terms of how the data will be used. Another consideration businesses need to make is what would happen in the case of data privacy failures.

Building a culture of ethical marketing practices within an organization by employing responsible use of AI technologies is crucial to enhancing rather than compromising customer trust (Gupta et al., 2024). This might mean weighing the advantages of personalized marketing with the consideration of customers’ boundaries.

It is essential to determine how bias and unfairness during the use of AI in marketing can be mitigated. Some scholars propose algorithm improvements (for example, Celis et al., 2019; Joseph et al., 2016). Ali (2021) emphasized the importance of prioritizing users in addressing bias to develop sustainable solutions. Recognizing that users are frequently the ones impacted by these harms, it is essential to consider their sensitivities in

devising mitigations. Ali (2021) highlighted the necessity of shifting toward solutions that prioritize objectives defined by users, suggesting that this approach may yield more meaningful outcomes compared to independently established objectives.

Businesses must ensure a fundamental understanding of how AI technology drives decision-making processes. In marketing, AI-based decisions can have significant impacts in areas such as pricing, promotion value, and the timing of promotions (Rai, 2020). Another critical area is product recall, where AI-derived decisions can have far-reaching consequences. Rai (2020) asserts that evaluating the accuracy of AI predictions relative to the need for explanations in various marketing tasks will help marketers understand the objectives AI systems should fulfill. This understanding enables collaboration with AI developers to determine the most effective strategies to achieve these goals.

Research has shown that misinformation can have negative implications for the brand in terms of undermining brand equity (Berthon & Pitt, 2018) and consumer trust (Visentin et al., 2019). Fearon (2017) summarizes the impacts of misinformation on digital marketing activities. Consumers' confidence in the information encountered on digital platforms, encompassing paid content such as advertisements and organic content like social media posts, has significantly diminished. Consequently, digital marketers must develop effective strategies to convey the value propositions of their products or services to consumers. Managing the online content to which consumers are exposed presents a significant challenge, requiring marketers to avoid associations that could tarnish a brand's reputation, particularly with controversial content. Moreover, digital marketers face considerable pressure to create engaging content for consumers, further complicated by the inherently captivating nature of misinformation. Therefore, it is imperative for digital marketers to continually validate the accuracy and authenticity of the information they disseminate.

## CHAPTER SUMMARY

Integrating AI in marketing offers significant advancements but also brings ethical implications. As companies harness AI to analyze vast amounts of consumer data, they must distinguish between beneficial personalization and invasive data practices. The personalization paradox underscores the complexity of this balance, indicating that while personalized marketing can enhance consumer engagement, excessive personalization can lead to heightened privacy concerns and reduced trust.

Ethically, the responsibility of AI systems in marketing extends beyond mere compliance with privacy laws. It encompasses the need to address biases inherent in AI algorithms, which, despite their data-driven nature, can reflect human prejudices. The development and deployment of these algorithms must be approached with a commitment to fairness and transparency, ensuring that marketing practices do not inadvertently discriminate against or misinform certain demographic groups.

Moreover, the opacity of AI decision-making processes, often termed "black-box AI," poses significant challenges. To build consumer trust, companies must strive for greater explainability of AI systems, particularly in consequential marketing decisions.

such as pricing and promotions. This transparency is crucial for regulatory compliance and fostering an ethical marketing environment where consumers feel secure and respected.

The proliferation of misinformation online presents significant challenges for both consumers and businesses. AI's role in generating vast amounts of difficult-to-detect false information complicates efforts by social media platforms and law enforcement agencies to manage this issue. Misinformation can undermine brand equity and consumer trust, complicating the digital marketing landscape. Digital marketers must navigate the erosion of consumer confidence in online information, manage the risk of reputational harm from associations with misleading content, and ensure the authenticity of their communications. Addressing these challenges requires ongoing vigilance and ethical considerations in digital marketing practices.

The cultural context further complicates the ethical landscape of AI in marketing. As algorithms are predominantly developed and tested in Western contexts, their global application requires a nuanced understanding of diverse cultural attitudes toward privacy and technology. Marketers must consider these cultural differences to ensure that AI systems are ethically and effectively implemented across various regions.

In conclusion, the ethical implications of AI in marketing are multifaceted, involving privacy concerns, algorithmic fairness, transparency, and cultural sensitivity. Companies must adopt a holistic approach to AI ethics, prioritizing responsible data practices, mitigating biases, and enhancing transparency to build and maintain consumer trust. By doing so, they can harness the power of AI to create value for both businesses and consumers while upholding ethical standards that protect and respect consumer rights.

## KEY TERMS

- **Algorithmic Bias:** Algorithmic bias refers to the systematic and replicable errors in computer systems that lead to inequality and discrimination based on legally protected characteristics, such as race and gender (Jackson, 2021).
- **Ethical AI:** The practice of developing and deploying AI technologies in a manner that is fair, transparent, and free from bias, promoting corporate social responsibility.
- **Explainable AI (XAI):** A class of systems that provide visibility into how an AI system makes decisions and predictions and executes its action (Rai, 2020, p. 138).
- **Fairness in decision-making:** The absence of any prejudice or favoritism toward an individual or group based on their inherent or acquired characteristics (Mehrabi et al., 2021, p. 115:2).
- **Responsible AI (RAI):** Responsible AI refers to the development and deployment of artificial intelligence systems that are ethical, transparent, and aligned with societal values. It emphasizes fairness, accountability, and minimizing harm, ensuring that AI technologies are designed and used in ways that respect human rights and privacy and promote positive outcomes for all stakeholders.

- **Transparency:** Transparency in AI refers to the clarity and openness with which AI systems and their decision-making processes are communicated to users and stakeholders.
- **Trustworthy AI (TAI):** A concept that refers to artificial intelligence systems that are reliable, ethical, and aligned with human values, ensuring fairness, transparency, accountability, and respect for privacy, while minimizing harm and bias.
- **Veracity of information:** A concept that refers to the degree of truthfulness or accuracy of information that is false or misleading. In the context of misinformation, it highlights the extent to which the content is inaccurate, deceptive, or fabricated, and can impact public perception, decision-making, and trust.

## DISCUSSION QUESTIONS

- 1 How do AI-driven personalized recommendations and targeted advertising balance the benefits of personalization with the risk to consumer privacy?
- 2 How does the perceived “creepiness” of AI technologies, such as intelligent voice assistants and chatbots, influence consumer resistance to these technologies?
- 3 What role do legal frameworks like GDPR and CCPA play in regulating the use of AI in marketing, and how effective are they in addressing the rapid pace of technological advancements?
- 4 How can marketers ensure that AI algorithms used for targeted marketing are free from biases, considering the inherent biases in the data on which these algorithms are trained?
- 5 How does the lack of transparency in AI algorithms affect consumer trust, and what role does explainable AI (XAI) play in addressing these concerns?
- 6 How can digital marketers effectively counteract the negative impacts of misinformation and disinformation on consumer trust and brand equity throughout the consumer journey?
- 7 What role does algorithmic bias play in spreading misinformation in digital marketing, and how can marketers address the challenges of echo chambers and radicalization among certain demographic groups?
- 8 How do cultural differences influence ethical concerns and attitudes toward AI adoption, and to what extent do factors such as exposure to AI in popular culture mitigate these differences among users from diverse cultural backgrounds?
- 9 What are the foundational components and principles of Trustworthy AI, and how can adopting these principles contribute to addressing the ethical challenges of applying AI in marketing?
- 10 How can marketers effectively address consumer concerns regarding data privacy in AI-driven marketing, particularly regarding data storage, reuse, and potential privacy failures, while simultaneously building trust?

TABLE 11.1 AI and Online Resources

Resource	URL	Description
<b>Ted Talk by Jessica Apotheker</b>	<a href="https://www.youtube.com/watch?v=3MwMlI8n1qM">www.youtube.com/watch?v=3MwMlI8n1qM</a>	Generative AI is poised to transform the workplace, but we still need human brains for new ideas. Marketing expert Jessica Apotheker explores how marketers can find their niche in the world of AI.
<b>Masters in Marketing: AI ethics</b>	<a href="https://www.youtube.com/watch?v=9a7jW1bbKHs">www.youtube.com/watch?v=9a7jW1bbKHs</a>	This video dives deeper into AI ethics and the key concerns surrounding generative AI, providing examples of ethical concerns, and most importantly, how to ensure ethics are respected and used responsibly in marketing your business.
<b>Forbes: The Ethical Dilemma Of AI In Marketing: A Slippery Slope</b>	<a href="https://www.forbes.com/sites/elijahclark/2024/03/14/the-ethical-dilemma-of-ai-in-marketing-a-slippery-slope/">www.forbes.com/sites/elijahclark/2024/03/14/the-ethical-dilemma-of-ai-in-marketing-a-slippery-slope/</a>	AI has revolutionized the marketing landscape, offering businesses unprecedented insights into consumer behavior and preferences. However, as AI becomes increasingly intertwined with marketing strategies. This article covers the question of ethics becoming more pressing.
<b>Sprout Social: AI ethics</b>	<a href="https://sproutsocial.com/insights/ai-ethics/">https://sproutsocial.com/insights/ai-ethics/</a>	There are concerns surrounding the ethics of AI that are covered in this article.
<b>Hubspot: AI ethics</b>	<a href="https://blog.hubspot.com/marketing/ai-ethics">https://blog.hubspot.com/marketing/ai-ethics</a>	This article discusses how AI ethics and ethical decision-making can improve the technology.
<b>European Parliament: The ethics of artificial intelligence</b>	<a href="https://www.europarl.europa.eu/RegData/etudes/STUD/2020/634452/EPRS_STU(2020)634452_EN.pdf">www.europarl.europa.eu/RegData/etudes/STUD/2020/634452/EPRS_STU(2020)634452_EN.pdf</a>	This report deals with the ethical implications and moral questions that arise from the development and implementation of AI technologies. It also reviews the guidelines and frameworks that countries and regions around the world have created to address them.
<b>Innovate UK</b>	<a href="https://iuk.ktn-uk.org/wp-content/uploads/2023/10/responsible-trustworthy-ai-report.pdf">https://iuk.ktn-uk.org/wp-content/uploads/2023/10/responsible-trustworthy-ai-report.pdf</a>	This report represents a single and common frame of reference on core principles, key innovation priorities, new commercial opportunities, and policy and standards development relating to responsible and trustworthy AI (RTAI).

Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.



**FIGURE 11.1** QR Code to Online Support Material

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# Implementing AI in Marketing Education

*Mary C. Martin and Michael J. Martin*

## LEARNING OBJECTIVES

Readers will be able to:

- 1 Analyze higher education's response to the advent of AI, including benefits, concerns, and strategies for using AI effectively in the classroom.
- 2 Explain how AI technologies are transforming the landscape of marketing education.
- 3 Demonstrate strategies and tactics for effectively incorporating AI tools into the marketing curriculum.
- 4 Describe assignments requiring students to create content for a blog post and social media posts and conduct a sales role-play using ChatGPT.
- 5 Identify the challenges and opportunities presented by integrating AI in marketing education.
- 6 Discuss the implications of AI in marketing education for marketing practitioners.

## INTRODUCTION

Coupled with the fact that ChatGPT attracts 207.7 million visitors each month (Semrush, 2024), many conversations are taking place in higher education around AI, and educators are evaluating and grappling with the potential uses, opportunities, concerns, and challenges surrounding the use of AI tools. Educators have called for the reimagining and integration of AI into the marketing curriculum (Acar, 2024; Elhajjar et al., 2021; Ferrell & Ferrell, 2020; Peres et al., 2023). Some marketing educators have embraced AI, and the literature has provided a variety of ways in which they are doing so, including in writing

with tone analysis (Dingus & Black, 2021), predicting customer churn (Thontirawong & Chinchanchokchai, 2021), delivering elevator pitches (Saavedra Torres & Heath, 2023), and enhancing sales role plays (Milovic et al., 2024).

AI has significantly impacted marketing for practitioners and faculty in higher education. A 2023 survey indicated that those working in marketing and advertising had the highest rate of generative AI adoption (37%) compared to other industries (Fishbowl, 2024). Further, AI can significantly impact the productivity of various business functions, with marketing and sales likely benefiting the most. Statista estimates an added value range between \$760 and \$1,200 billion for marketing and sales (*AI Productivity Impact*, n.d.).

Whether marketing faculty like it or not, the reality is that students in higher education are using AI for various tasks, including schoolwork. Gulati et al. (2024), in examining the dimensions that influence the adoption and effective utilization of ChatGPT by marketing students, found that marketing students perceive ChatGPT as beneficial for enhancing their learning abilities and improving their academic performance and believe that ChatGPT will enable them to access relevant information, gain insights, and solve problems more effectively. The authors also found that marketing students perceive ChatGPT as a user-friendly tool that contributes to educational productivity and is enjoyable and pleasurable to use, increasing their likelihood of adoption. In a survey of 1,000 undergraduate and graduate students regarding their perspectives on AI in higher education, 56% of college students indicated that they used AI on assignments or exams. However, over half (54%) said that using AI on schoolwork or exams is a form of cheating or plagiarism (Nam, 2023).

This chapter discusses AI literacy and the need for marketing educators to embrace and use AI while also developing AI literacy in students and deterring the improper use of AI. Strategies and tactics for marketing educators to use AI to be more effective and efficient in their teaching and enhance student learning and engagement are presented. The chapter also provides suggestions on how marketing educators can put AI into the hands of students, training and assisting them to use AI responsibly, efficiently, and effectively to enhance and supplement their learning in the classroom.

## THE IMPACT OF AI ON MARKETING EDUCATION

For marketing educators, the last few years have been the most daunting and challenging, yet likely the most exciting, with the rise of AI. While questions of how to handle the misuse of AI by students have dominated and persist in higher education conversations, marketing educators also see the vast potential of AI for themselves and their students in terms of learning and engagement. The authors propose that AI is and will continue to impact marketing education in the following ways:

- 1 **AI is changing what and how marketing educators teach:** The effectiveness of traditional assessment techniques such as multiple-choice tests and lengthy term papers is being questioned in light of students' improper use of AI. As a result,

marketing educators are seeking ways to create meaningful learning opportunities for students. Further, AI is affording marketing educators both opportunities and challenges. Questions exist about how marketing educators may take advantage of the opportunities and how to confront challenges awarded by AI. For example, what efficiency gains can marketing educators enjoy by using AI?

- 2 AI is changing what and how students learn:** Students may be becoming over-reliant on AI, focusing on learning how to use AI to complete assignments and bypass opportunities to think critically and solve problems.

In response to the issue of AI changing what and how marketing educators teach, the chapter makes a case for marketing educators to embrace AI, not ignore or fear it. To do so, they must embrace AI literacy—that is to be able to understand, use, monitor, and critically reflect on AI applications without necessarily being able to develop AI models (Laupichler et al., 2022)—and, in turn, develop AI literacy in their students. Issues critical to AI literacy and strategies that help deter the improper use of AI are discussed. Further, specific strategies and tactics to enhance student learning and engagement and examples where AI has been implemented in the classroom are presented. AI prompts and output for specific use cases across various marketing classes are provided. In response to the issue of AI changing how students learn, several strategies for training students to use AI to improve their learning are discussed. The training described in the chapter is intended to help students think critically when using AI, not to train students to use AI to do their work and complete assignments. With “ChatGPT rapidly becoming more popular and dynamically evolving in the educational field” (Rajabi et al., 2024, p. 34), the AI prompts and output provided use ChatGPT. However, the prompts may be used or adapted for other AI platforms such as Gemini and Copilot. The chapter also presents suggestions for using AI to perform administrative tasks for marketing educators to be more efficient in their work that supports the classroom. In addition, challenges, including concerns about the biases, limitations, and inaccuracy of AI, are discussed.

In response to the issue of AI changing what and how students learn, the chapter presents ways marketing educators can incorporate AI in the classroom and show students how it can be an assistive tool and not something that will replace a student’s ability to think critically. The technology behind AI is growing rapidly, and its use in the classroom as another tool for students to engage with is seemingly endless. As Elhajjar et al. (2021, p. 9) writes, “It is essential to integrate AI into marketing education since it enhances the students’ abilities and skills.”

The intended result of the chapter is for marketing educators to be excited and rejuvenated in their pursuits with AI, continuing to improve their teaching, improving their students’ learning and engagement, and preparing students for exciting, challenging, and fulfilling marketing careers. Armed with a good understanding of AI in higher education and, in particular, marketing education, our goal is that readers will be enthusiastic about developing and implementing AI strategies, assignments, and tools in the marketing classroom and embrace the role of AI-powered marketing educators. However, as AI continues to evolve, marketing educators must continually learn and adapt their teaching strategies and methods.

## The AI-powered Marketing Educator Framework

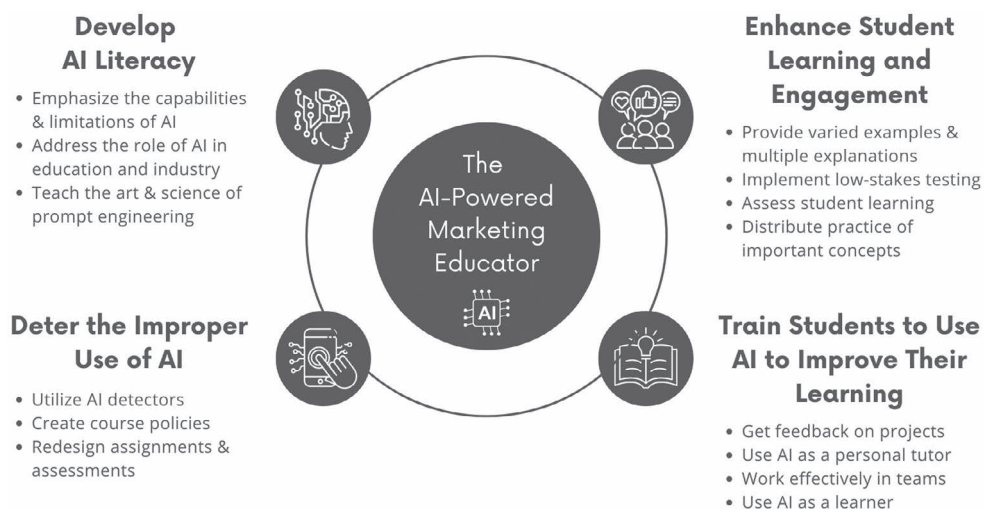
A framework for incorporating AI into marketing pedagogy developed by the authors is shown in Figure 12.1. It includes four components: 1) Developing AI literacy; 2) deterring the improper use of AI; 3) enhancing student learning and engagement; and 4) training students to use AI to improve their learning. For each component of the framework, specific strategies, tactics, and examples are presented in the following sections. The components, strategies, tactics, and examples are not exhaustive, as AI and its applications will continue to evolve.

### Develop AI Literacy

The first component of the AI-Powered Marketing Educator framework is developing literacy in AI. Marketing educators and students today must become equipped with the skills and knowledge to use AI effectively and efficiently. AI literacy is the ability to understand, use, monitor, and critically reflect on AI applications without necessarily being able to develop AI models and “focuses mainly on learners without a computer science background (‘non-experts’)” (Laupichler et al., 2022, p. 1). More simply, AI literacy involves understanding what artificial intelligence is about, how to use it, and how to think critically about it. The following discussion provides an overview of selected issues relevant to students and marketing educators pursuing literacy in AI.

### Emphasize the Capabilities and Limitations of AI

AI literacy requires an understanding of the capabilities and limitations of AI tools and how the various tools (and versions of those tools) differ in those respects. For example,



**FIGURE 12.1** The AI-Powered Marketing Educator: Strategies and Tactics for Managing and Using AI in the Classroom

as of August 2024, ChatGPT 4.0 could access the Internet while ChatGPT 3.5 could not (even though it may act like it can when responding to prompts). AI literacy also requires the ability to critically evaluate AI output, recognize biases and inaccuracies, and understand the potential of AI tools in perpetuating stereotypes (Milovic et al., 2024). In helping build AI literacy in students, marketing educators should develop and distribute specific guidelines that address the capabilities and limitations of AI, the benefits and challenges, and best practices for AI interactions. To communicate effectively with AI, Mollick and Mollick (2023a) suggest the following:

- 1 **Seek clarity when confused by AI's output:** When the output provided by AI is not clear, ask it to expand its explanation, provide different examples, and/or use different wording until clarity is provided.
- 2 **Provide context to assist AI in providing more meaningful output:** The output will be more valuable when AI is provided information that helps it understand the meaning of a prompt, such as giving AI a role (e.g., "You are a marketing instructor who explains the four p's to college students in an introductory marketing class.").
- 3 **AI may not be tracking a conversation:** Because AI has limited memory, reminding it of what you are seeking and continuing to ask questions will help it get back on track and provide better output.

### Application 12.1 Developing AI Literacy

Assign students the task of using AI tools (e.g., ChatGPT) to write a blog post about a specific marketing topic. Then, ask them to fact-check the output against trusted sources and report on the inaccuracies.

When using AI to write blog posts, for example, the need for students to understand AI's capabilities and limitations is especially important. A student cannot merely prompt ChatGPT to "write a blog post about Instagram marketing in 2024" because, as of August 2024, if using ChatGPT 3.5, the output is based on a screenshot of information and knowledge up until January 2022. In this case, ChatGPT will write a blog post (i.e., produce output that seems like it might be about Instagram marketing in 2024), but the output will likely be very inaccurate. It cannot look up current information or provide real-time citations from the Internet. A student would instead need to use an AI tool with browser capabilities.

### Address the Role of AI in Education and Industry

Marketing students should understand AI's role in education and industry. Educators need to stress that AI tools like ChatGPT can complement, not replace, school and career-related work. Further, students should be able to use various AI tools, not forgoing their



development and utilization of critical thinking and problem-solving skills. Instead, they should be developing those skills by critically evaluating AI output.

Most educators and practitioners do not believe AI will replace human content creators on marketing teams. Instead, they believe AI can help make marketers' work more relevant, easier to produce, and better aligned with an audience's needs and interests. Brower (2023, para. 7) writes,

But humans also have unique attributes which are unmatched by tech. Humans are creative—designing something from nothing, intuiting, inferring, adapting, and functioning with nuance. People are also uniquely curious—imagining, exploring, and wondering. Solutions like ChatGPT can provide some of the answers, but people are best at asking the questions in the first place.

### Teach the Art and Science of Prompt Engineering

Prompt engineering involves designing and optimizing prompts (questions or assigned tasks) in AI tools such as ChatGPT. The goal of prompt engineering is to craft clear, concise, and effective prompts in eliciting the desired response. Effective prompts require specificity and clarity (the “science”) and creativity (the “art”) to generate more accurate, relevant, and valuable content. Marketing educators should provide guidelines and processes for writing prompts. For example, some general guidelines for writing prompts include:

- 1 Be specific: The more criteria you give, the more focused the output will be.
- 2 Work in steps: Break tasks into small chunks.
- 3 Iterate and improve: Reword the inputs to have ChatGPT improve its output.

The authors developed “ChatGPT in 5 Steps,” a handout outlining a process for students and example prompts, as shown in Table 12.1. The method includes providing context (Steps 1 and 2), assigning tasks (Steps 3 and 4), and testing, evaluating, and iterating (Step 5). As students practice and experiment with prompting AI, their output generally improves in the authors' experiences.

### Deter the Improper Use of AI

The second component of the AI-Powered Marketing Educator framework involves strategies for marketing educators to deter the improper use of AI. “Cheating” in marketing courses generally involves students using various unauthorized sources to help them complete their assignments. It can take several forms, including, for example, using notes to take an exam, copying others' work, plagiarism, using a mobile device to help take a test, and, most recently, using AI to write papers. A primary concern for educators, cheating with AI has received much attention, and a variety of classroom strategies and tactics have been proposed or utilized primarily with the intent of deterring the improper use of AI (Feldstein, 2023; Huang, 2023; Mollick & Mollick, 2023b; Mollick & Mollick, 2023c). The chapter presents three strategies for deterring student cheating.



**TABLE 12.1** ChatGPT in 5 Steps: Master the Art of Crafting Effective ChatGPT Prompts in Just 5 Simple Steps

<b>1 Introduce yourself and set expectations</b>	<p><b>Tell ChatGPT your intention, the context, and how you want it to engage with you, such as:</b></p> <ul style="list-style-type: none"> <li>• I am . . . and I want you to help me . . .</li> <li>• You are going to act as a . . .</li> <li>• Explain this to a 5-year-old</li> <li>• The tone should be authoritative, but friendly, conversational, and empathetic</li> </ul> <p><b>EXAMPLE PROMPT:</b></p> <p>I am the founder of a professional blog for students wanting to learn more about social media marketing and starting a career in social media marketing. I will tell you about the blog so that you can help me generate a marketing strategy. Acknowledge with OK.</p>
<b>2 Prime with relevant information</b>	<p><b>Continue providing relevant details, such as:</b></p> <ul style="list-style-type: none"> <li>• Information about your topic</li> <li>• Information about your buyer persona/target audience</li> <li>• Information about your competitors and the industry</li> </ul> <p><b>EXAMPLE PROMPT:</b></p> <p>The blog is a go-to online source for social media marketing that publishes posts about how to simplify social media marketing, tips and tricks, careers in social media marketing, and how to compose social media posts. Acknowledge with OK.</p>
<b>3 Assign a task</b>	<p><b>Give a specific task to complete, being clear and concise in your instructions, such as:</b></p> <ul style="list-style-type: none"> <li>• Summarize a concept</li> <li>• Generate ideas</li> </ul> <p><b>EXAMPLE PROMPT:</b></p> <p>Acting as a social media marketing expert, generate a summary of the blog's target audience (students wanting to learn more about social media marketing and careers in social media marketing).</p>
<b>4 Assign additional tasks</b>	<p><b>Continue giving it tasks to complete, based on the information provided, such as:</b></p> <ul style="list-style-type: none"> <li>• Generate content</li> <li>• Generate a list</li> </ul> <p><b>EXAMPLE PROMPT:</b></p> <p>Generate frequently asked questions and answers for the blog that would be important to its target audience.</p>
<b>5 Test, evaluate, and iterate</b>	<p><b>Evaluate the output and adjust as necessary, such as:</b></p> <ul style="list-style-type: none"> <li>• Reword the prompt or task</li> <li>• Test different keywords and phrases</li> <li>• Add or remove modifiers</li> </ul> <p><b>EXAMPLE PROMPT:</b></p> <p>Generate FAQs and answers appropriate for the blog in an empathetic, friendly tone.</p>

Further, students should be educated about the fact that some organizations have strict no-use AI policies and, when using some AI applications, an organization's confidential information may be leaked into the applications' learning models. As a result, students need not to be reliant on the "crutch" that AI may provide.

### Utilize AI Detectors

AI detectors estimate the probability that humans or AI wrote a paper submitted by a student. They may reduce students' motivation to cheat because of the potential negative implications (e.g., flunking an assignment or a class). However, marketing educators must recognize the arguments for and against using AI detectors. "Understanding how students cheat with these new tools and how AI detectors work is now essential for professors, students, and institutions" (Bowen & Watson, 2024, p. 1).

While AI detectors were initially popular and thought to be the solution to the problem of cheating, instructors have discovered that they are not necessarily effective or reliable, with some students being falsely accused of cheating (Coffey, 2024). In response, some universities have stopped using AI detectors. The situation is further complicated because students have applications that can help make AI writing undetectable, such as StealthGPT, by generating text that mimics human writing.

Regardless, AI detectors can still be utilized to help deter the improper use of AI. Still, students should be informed and marketing educators should recognize potential problems and proceed with caution if a student is suspected of using AI to write a paper. "Turnitin's technology is not meant to replace educators' professional discretion. Reports indicating the presence of AI writing, like Turnitin's AI writing detection feature, simply provide data points and resources to support a conversation with students, not determinations of misconduct," wrote Turnitin's Chief Product Officer Annie Chechitelli in an emailed statement (Ghaffary, 2023, para. 10). Appleby (2024) provides a comprehensive list and reviews of AI detectors.

### Address the Proper Use of AI Through Course Policies

Informing and educating students about the proper use of AI tools through course policies is another strategy for deterring student cheating with AI. Instructors should incorporate course policies into syllabi that define the acceptable use of AI, discuss AI with students in the context of academic integrity, and emphasize to students the importance of life-long learning. Academic integrity policies should incorporate definitions of plagiarism that include the use of AI. A course policy may prohibit the use of AI and read something like, "Collaboration with ChatGPT or other AI composition software is not permitted in this course" or allow its use on a case-by-case basis and read something like, "Please obtain permission from me before collaborating with peers or AI chatbots (like ChatGPT) on assignments for this course" (Feldstein, 2023, para. 10). Course policies should also: 1) Provide direction as to how students should cite or credit AI; 2) warn students about the inaccuracy of AI and its tendency to produce deceptive data ("hallucination"); 3) address how to use AI ethically and responsibly; and 4) emphasize the need to use AI

as a tool to learn, not just to produce content (Mollick & Mollick, 2023c). Examples of course policies can be found online (e.g., *AI Guidance & FAQs*, n.d.); instructors may prefer to include a milder approach, while others may choose to be more severe regarding guidelines and consequences.

## Change the Design of Assignments and Assessments

Changing the design of assignments and assessments can help deter student cheating with AI. Instead of multiple-choice exams and lengthy term papers, instructors may utilize more in-class assignments, oral exams, group work, handwritten assessments, and other types of activities that are not as vulnerable to the use of AI. For example, in a *marketing principles* course, instructors at the authors' institution eliminated an assignment requiring students to write a marketing plan for a selected product due to the increasing number of students using AI to generate their plans. Instead, students are now required to participate in an online simulation.

Assessments focusing on the *process* rather than the final product can also deter student cheating. In a *consumer behavior course*, for example, students may write a series of personal essays in class and, over several days or weeks, reflect upon and share their own experiences, feelings, and decisions to demonstrate their understanding of the five-step consumer decision-making process. Instructors can monitor their understanding of each step as they progress through the assignment. Because the process involves students' personal experiences and reflections and not objective knowledge, completion of the assignment using an AI tool like ChatGPT is not reasonable or feasible.

Scaffolding written assignments, such as essays or research papers, may also lessen the extent of cheating. Scaffolding is breaking down a larger writing assignment into smaller assignments. Students should write the first drafts of the smaller assignments in the classroom using browsers that monitor and restrict computer activity followed by a series of revisions that may or may not utilize AI. For each revision, students should explain and evaluate any AI content used.

For example, in a *marketing strategy class*, rather than merely having students submit a final plan at the end of the semester, instructors may require students to complete a comprehensive marketing plan by scaffolding the assignment. Over the course of a semester, students work on components of the plan during class. Week 1 of the assignment may have students writing about the target market for their chosen product, while Week 2 is dedicated to revising that section of the plan (with or without the use of AI as per the instructor's discretion). Subsequent weeks follow the same pattern—a draft is prepared, then revisions are made—to complete the remaining sections of the plan, such as the Unique Selling Proposition, Positioning Strategy, Product, Price, Place, Promotion, etc. By the end of the semester, students will have completed a comprehensive marketing plan. Because their work has been divided up, monitored in the classroom, and reviewed throughout the process, students have not had much, if any, opportunity to use AI. Students who have not started the assignment until the last few weeks of class will not feel the time pressure to complete it and, therefore, will not resort to AI for assistance. In addition, they will have developed critical thinking skills, connecting the dots between the components of a marketing plan.

## Enhance Student Learning and Engagement

The third component of the AI-Powered Marketing Educator framework involves marketing educators enhancing student learning and engagement through the use of AI. The chapter presents four strategies, including *providing multiple examples and explanations*, *implementing low-stakes testing*, *assessing student learning*, and *distributing practice of important ideas*. These types of activities are generally time-consuming and challenging for marketing educators; AI can help instructors implement these strategies much more quickly and easily, resulting in a variety of potential benefits for students. The following discussion presents several training strategies proposed by Mollick & Mollick (2023a) adapted for marketing educators. Specific examples demonstrating the use of ChatGPT are provided, but the prompts can be used in other AI applications.

### Use AI to Provide Varied Examples and Multiple Explanations

Providing varied examples and explanations of new and complex concepts may help students better understand the ideas when introduced in a course (Mollick & Mollick, 2023b), such as the consumer decision-making process, SEO, or brand positioning in a *marketing strategy course*. When presented with varied examples or multiple explanations, students can experience better recall and understanding of a single concept.

For example, in a *marketing principles course*, when introducing the concept of integrated marketing communications, an instructor may want to provide several examples using real-life brands or companies to illustrate it. Prompts to generate varied examples of integrated marketing communications and the output can be viewed online (with the full URL in Table 12.2). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.2.

In addition to varied examples, generating explanations is beneficial to student learning. Explanations that use a step-by-step approach adding details and incorporating a variety of perspectives will provide students with multiple explanations of one concept and, in turn, enhance their foundational knowledge, assist them in building mental maps of topics, and help them overcome common misconceptions. To develop effective explanations, instructors must

understand where students are and what they already know (prior knowledge), sequence and structure their explanations to move from the simple to the complex (a step-by-step approach), provide organizational cues that help students follow along (we are here, next we'll move on to.) and add concrete details to each explanation (examples or analogies) that help students grasp and contextualize a new concept in light of what they already know.

(Mollick & Mollick, 2023b, pp. 7–8)

For example, in a *digital marketing course*, to generate multiple explanations of Search Engine Optimization (SEO), prompts and the output can be viewed online (the full URL is in Table 12.2). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.3.

 Memory updated

Great choice! Integrated Marketing Communications (IMC) is a crucial concept in marketing. Here are four varied and accurate examples of IMC in action, tailored for college students:

#### Example 1: Coca-Cola's "Share a Coke" Campaign

**Description:** Coca-Cola replaced its iconic logo on bottles with 250 of the most popular names among teens and millennials in each country. The campaign encouraged people to find bottles with their friends' names and share a Coke together.

##### IMC Elements:

1. **Advertising:** TV commercials and online ads featured people finding and sharing Coke bottles with their names.
2. **Sales Promotion:** Personalized Coke bottles were a limited-time offer, encouraging immediate purchase.
3. **Public Relations:** The campaign generated extensive media coverage and social media buzz.
4. **Direct Marketing:** Personalized emails and social media messages invited customers to find their names on Coke bottles.

#### Example 2: Apple's Launch of the iPhone

**Description:** Apple's launch of the iPhone is a prime example of a well-orchestrated IMC strategy, combining various marketing channels to create a unified and impactful campaign.

##### IMC Elements:

1. **Advertising:** High-quality TV and online ads highlighted the iPhone's features and benefits.
2. **Public Relations:** Press releases and keynote presentations by Steve Jobs generated media coverage and hype.
3. **Sales Promotion:** Pre-order incentives and trade-in deals encouraged early purchases.
4. **Personal Selling:** Apple store employees provided demonstrations and personalized service to potential buyers.

#### Example 3: Nike's "Just Do It" Campaign

**Description:** Nike's iconic "Just Do It" campaign is a long-running IMC effort that has evolved over the years, featuring endorsements from athletes and inspiring messages.

##### IMC Elements:

1. **Advertising:** TV commercials, online ads, and billboards feature famous athletes and motivational messages.
2. **Social Media Marketing:** Nike uses platforms like Instagram and Twitter to engage with customers, share user-generated content, and promote new products.
3. **Sponsorship:** Partnerships with sports teams and events ensure Nike's presence in high-visibility arenas.
4. **Content Marketing:** Nike's website and apps provide workout tips, athlete stories, and product information.

#### Example 4: Starbucks' Integrated Customer Experience

**Description:** Starbucks uses an integrated approach to create a seamless customer experience, combining its physical stores with digital and social media efforts.

##### IMC Elements:

1. **Digital Marketing:** Starbucks' mobile app allows customers to order and pay ahead, earn rewards, and receive personalized offers.
2. **In-Store Promotion:** Digital displays and in-store events promote new products and seasonal offerings.
3. **Social Media:** Starbucks engages with customers through Instagram, Facebook, and Twitter, sharing promotions and user-generated content.
4. **Public Relations:** Corporate social responsibility initiatives, such as sustainability efforts and community projects, are publicized through various channels.

These examples illustrate how different companies effectively use IMC strategies to create cohesive and impactful marketing campaigns.

**FIGURE 12.2** ChatGPT Output: Varied Examples of Integrated Marketing Communications

## Explanation of Search Engine Optimization (SEO)

### What is SEO?

Search Engine Optimization (SEO) is the process of enhancing a website to improve its visibility on search engines like Google, Bing, and Yahoo. When users search for keywords related to your business or content, SEO helps your website appear higher in the search results. The goal of SEO is to attract organic (non-paid) traffic to your site by making it more appealing to search engines.

### How SEO Works

SEO involves several strategies and techniques, including:

1. **Keyword Research:** Identifying the words and phrases potential customers are using to search for products, services, or information related to your business. For example, if you run a bakery, important keywords might include "best cupcakes in town" or "gluten-free bread."
2. **On-Page SEO:** This includes optimizing individual pages on your website. Key elements include:
  - **Title Tags and Meta Descriptions:** Creating compelling titles and descriptions that incorporate your target keywords.
  - **Content Quality:** Writing high-quality, informative content that provides value to your audience.
  - **URL Structure:** Making sure URLs are clean and include relevant keywords.
  - **Internal Linking:** Linking to other pages on your site to help search engines understand the structure and content of your website.
3. **Off-Page SEO:** This involves activities outside of your website that influence your rankings, such as:
  - **Backlinks:** Getting other reputable websites to link back to your site. This signals to search engines that your content is credible and authoritative.
  - **Social Media Marketing:** Using social media platforms to promote your content and attract visitors.
4. **Technical SEO:** Ensuring your website is technically sound and easily crawlable by search engines. This includes:
  - **Mobile-Friendliness:** Making sure your site looks good and works well on mobile devices.
  - **Site Speed:** Ensuring your website loads quickly.
  - **Sitemap and Robots.txt:** Helping search engines understand your site's structure and which pages to crawl.

### Example of SEO in Action

Imagine you own a small online store that sells handmade jewelry. You want more people to find your products when they search for jewelry online. Here's how SEO can help:

1. **Keyword Research:** You discover that many people search for "handmade silver earrings." You decide to use this keyword strategically throughout your website.
2. **On-Page SEO:** You write a blog post titled "Top 10 Handmade Silver Earrings for 2024" and include the keyword naturally in your content. You also update your product pages to include detailed descriptions and images of your handmade silver earrings.
3. **Off-Page SEO:** You reach out to fashion bloggers and ask them to review your jewelry. Some of them link back to your site, boosting your credibility.
4. **Technical SEO:** You ensure your website is fast and mobile-friendly, making it easy for users to navigate and for search engines to index.

### Five Analogies to Understand SEO

1. **Library System:** Imagine a vast library with millions of books. SEO is like organizing your book (website) so that the librarian (search engine) can quickly find it when someone asks for a specific topic (keyword).
2. **Job Application:** Just as you tailor your resume (website content) to match a job description (user search query), SEO involves optimizing your website to match what search engines look for.
3. **Real Estate:** Think of your website as a house. SEO is like making improvements (keyword optimization, quality content) to increase its value and attractiveness so it stands out in a competitive market (search results).
4. **Recipe Book:** Consider your website as a recipe book. On-page SEO is like making sure each recipe (webpage) is well-written and easy to follow, while off-page SEO is like getting renowned chefs (other websites) to endorse your recipes.
5. **Networking Event:** SEO is akin to attending a networking event. On-page SEO is like dressing well and having a clear introduction (optimized content), while off-page SEO is like getting recommendations from influential people (backlinks from reputable sites).

By understanding and implementing these SEO strategies, you can significantly improve your website's visibility and attract more organic traffic from search engines.

**FIGURE 12.3** ChatGPT Output: Multiple Explanations of Search Engine Optimization (SEO)

## Use AI to Implement Low-Stakes Testing

Low-stakes testing (Mollick & Mollick, 2023b) in the form of practice tests, quizzes, short-answer tests, and within-lecture questions can help students remember and retrieve information. AI can assist instructors in generating various forms of low-stakes testing.

For example, in a *marketing research class* discussion about t-tests and regression analysis, a practice test administered after the lecture coupled with questions posed during the lecture will help students retain and comprehend the information and better recall it when taking an exam later. Prompts to generate a practice quiz and the output can be viewed online (the full URL is in Table 12.2). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.4.

## Use AI to Assess Student Learning

Assessing student learning (Mollick & Mollick, 2023b) is vital to identify what students know or have learned and what they are confused by. Immediate feedback can be obtained in class through a “1-minute paper” assessment where students respond to questions such as “What was the most important idea or concept covered in class today?” and “What did you struggle to understand today?” After students submit their 1-minute papers through a learning management system (LMS) or in a Google Doc, the instructor can feed an AI tool their responses and have it summarize the most important concepts learned and areas of confusion.

For example, a one-minute paper assessment can be assigned in a *global marketing class* after a lecture and discussion of market entry studied. In this example, ChatGPT was used to generate ten student responses to this assignment. The prompt and output can be viewed online (the full URL is in Table 12.2). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.5.

The instructor can prompt AI further by asking for clarifications and explanations and then address the student responses during a future class meeting.

## Use AI to Distribute Practice of Important Concepts

Distributing practice of important concepts is having students practice material several times over days and months, allowing them to make connections, develop a deeper understanding of a concept, and retrieve previously learned information more easily. AI can help marketing educators generate brief topic overviews and questions to test student knowledge at intervals. Difficulty levels can be ramped up, and questions can be added as students progress in understanding the material. In addition, AI can help instructors incorporate ideas or facts into a current topic, make connections explicit to students by linking a new topic to a previously learned one, and continue to generate questions to test student knowledge (Mollick & Mollick, 2023b).

For example, in a *marketing strategy class*, the instructor may cover topics of SWOT analysis, positioning strategy, and the marketing mix (typically presented linearly in that order), where students should understand the relationships between the topics, relying on what they learned about the previous concept and connecting that knowledge to the next concept. Prompts to generate the distributed practice of a SWOT Analysis and Brand Positioning Strategy, and the output can be viewed online (the full URL is in Table 12.2). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.6.



Memory updated

Great, I'll create a set of multiple-choice questions focused on the use of t-tests and regression analysis in a marketing research context for college students. Here are the questions:

### Quiz: Understanding t-Tests and Regression Analysis in Marketing Research

#### Question 1:

What is the primary purpose of a t-test in marketing research?

- A) To compare the means of two groups to determine if they are significantly different from each other.
- B) To measure the strength and direction of the relationship between two variables.
- C) To predict the value of a dependent variable based on the value of an independent variable.
- D) To determine the variance within a single group.

#### Question 2:

In which scenario would you use a paired sample t-test?

- A) Comparing the sales performance of two different products in the same time period.
- B) Comparing the pre-test and post-test scores of the same group of customers after a marketing campaign.
- C) Comparing the average purchase amounts of customers from two different regions.
- D) Comparing the satisfaction levels of customers from two different age groups.

#### Question 3:

Which of the following statements about regression analysis is true?

- A) Regression analysis can only be used with continuous variables.
- B) Regression analysis helps to identify the causal relationship between variables.
- C) Regression analysis can predict the value of one variable based on the value of another variable.
- D) Regression analysis is used to compare the means of two groups.

#### Question 4:

In a simple linear regression model, what does the slope coefficient represent?

- A) The value of the dependent variable when the independent variable is zero.
- B) The change in the dependent variable for a one-unit change in the independent variable.
- C) The overall fit of the model to the data.
- D) The strength of the relationship between two categorical variables.

#### Question 5:

Which assumption is crucial for both t-tests and regression analysis to provide valid results?

- A) The data must be normally distributed.
- B) The sample sizes must be equal.
- C) The data must be categorical.
- D) The variables must be measured on a nominal scale.

### Answer Key and Explanation:

**Question 1: A) To compare the means of two groups to determine if they are significantly different from each other.**

**Explanation:** The primary purpose of a t-test is to compare the means of two groups and determine if the differences between them are statistically significant.

**Question 2: B) Comparing the pre-test and post-test scores of the same group of customers after a marketing campaign.**

**Explanation:** A paired sample t-test is used when comparing two related groups, such as the same group of customers before and after a marketing intervention.

**Question 3: C) Regression analysis can predict the value of one variable based on the value of another variable.**

**Explanation:** Regression analysis is used to predict the value of a dependent variable based on the value of one or more independent variables.

**Question 4: B) The change in the dependent variable for a one-unit change in the independent variable.**

**Explanation:** In a simple linear regression model, the slope coefficient indicates how much the dependent variable changes for a one-unit change in the independent variable.

**Question 5: A) The data must be normally distributed.**

**Explanation:** Both t-tests and regression analysis assume that the data are normally distributed to ensure the validity of the results.

These questions and explanations should help the students better understand the use of t-tests and regression analysis in marketing research.

**FIGURE 12.4** ChatGPT Output: Low-stakes Practice Quiz of Regression Analysis and T-tests



## Summary of Student Responses

### Key Points Students Found Most Important:

#### 1. Types of Market Entry Strategies:

- Understanding different market entry strategies, especially distinctions between joint ventures, strategic alliances, exporting, franchising, and wholly owned subsidiaries.
- Insights into the strategic considerations behind choosing between these options.

#### 2. Strategic Considerations:

- The advantages and disadvantages of each market entry strategy, such as the low investment and risk of exporting and the high control but high cost of wholly owned subsidiaries.
- Factors influencing the choice of market entry strategy, including market size, competitive environment, and company resources.

#### 3. Rapid Expansion and Local Knowledge:

- How franchising allows companies to expand rapidly with lower capital investment by leveraging local knowledge.
- The benefits and risks of greenfield investments, emphasizing high control and significant investment.

### Areas of Confusion:

#### 1. Decision-Making and Control:

- Determining the appropriate level of control needed in joint ventures versus strategic alliances.
- Deciding between establishing a new subsidiary or acquiring an existing local business.

#### 2. Legal and Operational Challenges:

- Managing the logistics and legal requirements of exporting to multiple countries.
- Differences in legal and operational challenges between licensing and franchising in different countries.

#### 3. Risk Assessment and Partner Selection:

- Assessing and mitigating political and economic risks associated with greenfield investments.
- Selecting appropriate partners for strategic alliances and measuring their performance.
- Balancing trade-offs between risk and control when choosing a market entry strategy.

By addressing these areas of confusion in future classes, you can help students gain a clearer understanding of market entry strategies and enhance their learning experience.

**FIGURE 12.5** ChatGPT Output: One-minute Paper Assessment of Market-entry Strategies



Thanks for the details! Here are four ideas on how to integrate the SWOT analysis into your current topic of brand positioning strategy:

1. **Case Study Analysis:** Assign students to analyze a well-known brand and use SWOT analysis to assess the brand's current positioning strategy. This exercise will help students see how strengths, weaknesses, opportunities, and threats influence a brand's market positioning. They can present their findings with a focus on how the brand could adjust its positioning based on the SWOT outcomes.
2. **Group Discussions:** Organize a group discussion where students can compare and contrast the SWOT analysis of different brands within the same industry. This will give them insight into how different brands leverage their unique strengths or mitigate weaknesses and threats to carve out distinctive positions in the market.
3. **Role-Playing Exercises:** Create a role-playing activity where one group of students represents a company, and another acts as a consulting team using SWOT analysis to recommend new positioning strategies. This dynamic setting will encourage students to apply SWOT insights practically and creatively.
4. **Strategic Planning Workshop:** Conduct a workshop where students create a comprehensive positioning strategy for a hypothetical or real company. They start by performing a SWOT analysis and then develop a positioning statement that addresses the findings of the SWOT. This could be a collaborative project culminating in a presentation or written report.

To refresh their memory on SWOT analysis and engage them in the current lessons, you could ask these questions in class:

1. **Recall and Application Question:** "Can someone explain how understanding a company's weaknesses and threats can help in developing a stronger brand positioning strategy?"
2. **Critical Thinking Question:** "How might a company turn a weakness identified in a SWOT analysis into an opportunity for unique brand positioning?"

These questions and activities should help bridge the past topic with the current one, fostering a deeper understanding and application of both SWOT analysis and brand positioning strategy.

**FIGURE 12.6** ChatGPT Output: The Distributed Practice of a SWOT Analysis and Brand Positioning Strategy

**TABLE 12.2** Links to ChatGPT Examples to Enhance Student Learning and Engagement in Marketing Courses

<i>Teaching Strategy (Topic Addressed)</i>	<i>ChatGPT Output</i>
Figure 12.2. Varied Examples (Integrated Marketing Communications)	<a href="https://chatgpt.com/share/0774aa75-caae-4050-a7ed-320742981244">https://chatgpt.com/share/0774aa75-caae-4050-a7ed-320742981244</a>
Figure 12.3. Multiple Explanations (SEO)	<a href="https://chatgpt.com/share/1719d46f-3911-4fa0-97da-d3555163483d">https://chatgpt.com/share/1719d46f-3911-4fa0-97da-d3555163483d</a>
Figure 12.4. Low-Stakes Testing (Regression Analysis and T-tests)	<a href="https://chatgpt.com/share/e4d76bfa-e7f9-429b-89bb-90fd5444ca98">https://chatgpt.com/share/e4d76bfa-e7f9-429b-89bb-90fd5444ca98</a>
Figure 12.5. One-minute Paper Assessment (Market-entry Strategies)	<a href="https://chatgpt.com/share/7ddaca05-4173-4e11-bf11-e1b2cf25e465">https://chatgpt.com/share/7ddaca05-4173-4e11-bf11-e1b2cf25e465</a>
Figure 12.6. Distributed Practice (SWOT and Brand Positioning)	<a href="https://chatgpt.com/share/6f552ee4-9ba0-46a0-97d3-6889f8813999">https://chatgpt.com/share/6f552ee4-9ba0-46a0-97d3-6889f8813999</a>

## Train Students to Use AI to Improve Their Learning

The fourth component of the AI-Powered Marketing Educator framework involves marketing educators training students to use AI to improve their learning. The following discussion presents several training strategies Mollick and Mollick (2023a) proposed and adapted for marketing educators. Specific examples demonstrating the use of ChatGPT are provided, but the prompts can be used in other AI applications.

### Use AI to Get Feedback on Projects

Students' learning can benefit significantly from feedback. Marketing educators, however, balance many responsibilities, and training students to use AI to get input on projects can ensure they get timely and actionable feedback when instructors are not immediately available to do so (Mollick & Mollick, 2023a). Getting meaningful AI feedback requires instructors assist students with prompting AI appropriately. According to Mollick and Mollick (2023a), a good prompt will ensure that AI gets students to understand an assignment's guidelines, provides personalized feedback, creates a conversation between students and AI, and motivates students to critique their work. Instructors, however, must stress to students that feedback provided by AI is not intended to bypass the students' editing work.

For example, in a *marketing strategy class*, students are assigned a case study and provided a brief overview of an organization's situation. Part of a case study on Netflix requires students to write about whether they believe Netflix will remain a dominant force in streaming. To solicit feedback on a draft of the assignment, a student prompts AI with one provided by Mollick and Mollick (2023b). The conversation with ChatGPT continues with the student telling the AI that they are a senior marketing major in a marketing strategy capstone course, completing a case study on Netflix and then providing a

brief overview of Netflix and the assigned question. ChatGPT asks for “specific guidelines or rubrics” provided by the teacher, and the student uploads a PDF of a grading rubric and their draft response to the question. In this example, ChatGPT provides feedback that includes an assessment of strengths, areas for improvement, specific feedback (such as “expand on the point . . .,” “provide more insight into . . .,” and “consider rephrasing . . .”), questions for further reflection, and suggested next steps. ChatGPT then asks, “How do you plan to revise your draft based on this feedback?” The student may continue the conversation by explaining the planned revisions and inputting a revised draft for further feedback. The prompt and output can be viewed online (the full URL is in Table 12.3). The output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.7.

The student in this example received timely and actionable feedback that can be incorporated into further revisions. The instructor may request access to the ChatGPT output and the student’s initial and revised drafts as part of the assignment. In addition, the instructor should ask students to reflect on and evaluate the AI output as part of the process.

### Application 12.2 Brand Positioning

In a brand positioning assignment, students prepare an initial draft that outlines their analysis, positioning recommendations, and a justification for those recommendations. To solicit feedback on the draft, students use AI (e.g., ChatGPT) to assess their project by asking questions like:

- 1 What are the strengths of my analysis of the target audience?
- 2 Does my competitive analysis clearly highlight differentiators?
- 3 Are my brand positioning recommendations feasible and supported by data?

Then, students critically assess the AI’s feedback—which may include strengths (e.g., clear understanding of the target market) and weaknesses (e.g., vague positioning strategy or insufficient data support)—and reflect on how the feedback aligns with the grading rubric provided by the instructor.

Instructors may require students to resubmit their draft after incorporating the revisions for further AI feedback, continuing the iterative process of refinement.

### Use AI as a Personal Tutor

Due to a lack of financial and human resources, universities may struggle to provide students with meaningful and accessible tutoring services, especially in upper-level classes within specific majors such as marketing. AI provides an opportunity for students to receive tutoring on a particular subject and receive *personalized* tutoring. According to Mollick and Mollick (2023a), a good prompt will ensure that AI knows its role and mission, asks students about their learning level on a particular topic, asks students for explanations and ideas, adjusts to student performance, and provides explanations, examples, and analogies.

Thank you for sharing your draft. Here's some feedback based on the rubric and your response:

#### Strengths:

1. **Clear Introduction of the Issue:** You have clearly identified the central question of whether Netflix will remain the dominant streaming service.
2. **Recognition of Competition:** You acknowledge the competitive landscape and Netflix's struggles with content release, which is a critical factor in this analysis.
3. **Use of Data:** Including the data from Parrot Analytics adds credibility to your argument about the current challenges Netflix faces.

#### Areas for Improvement:

1. **Depth of Analysis:** Your analysis could be deeper. For instance, you mention local original content and top-rated series as potential strategies but don't delve into how effective these strategies have been or could be.
2. **Organization and Clarity:** The response could be better organized. It jumps from Netflix's global expansion struggles to the drop in audience demand without clearly connecting these points.
3. **Persuasiveness:** While you identify several issues, your argument could be more persuasive by clearly outlining the potential benefits or consequences of Netflix's strategies and market position.
4. **Conclusion:** The conclusion feels somewhat weak and indecisive. It would benefit from a more definitive stance based on the analysis provided.

#### Specific Feedback:

1. **Introduction:**
  - Consider rephrasing the first sentence for clarity: "As digital streaming services continue to compete with Netflix, it remains uncertain if Netflix will retain its dominance in the streaming market."
  - State why differentiation is crucial for Netflix in the current market context.
2. **Content Strategy:**
  - Expand on the point about releasing local original content. For example: "Netflix's strategy of releasing local original and top-rated series is aimed at attracting and retaining regional audiences. This approach has shown promise in markets like India and South Korea, where locally produced content has seen significant viewer engagement."
3. **Global Expansion:**
  - Provide more insight into why Netflix has not seen significant growth in certain countries. You could mention specific challenges such as market saturation, competition from local streaming services, or regulatory issues.
  - Elaborate on how Netflix plans to raise brand awareness and why this is a viable strategy for growth.
4. **Data Analysis:**
  - Explain the implications of the Parrot Analytics data more clearly. How does a drop below 50% global audience demand impact Netflix's market strategy and financial health?
5. **Conclusion:**
  - Strengthen your conclusion by summarizing the key points and taking a clear stance based on your analysis: "While Netflix faces significant challenges from competitors and fluctuating consumer preferences, its strategic focus on local content and global expansion, coupled with efforts to innovate in technology and user experience, could help it maintain a leading position in the streaming industry."

#### Questions for Further Reflection:

- How effective do you think Netflix's strategy of producing local original content will be in retaining and attracting subscribers?
- What other strategies could Netflix implement to address the drop in global audience demand?

#### Next Steps:

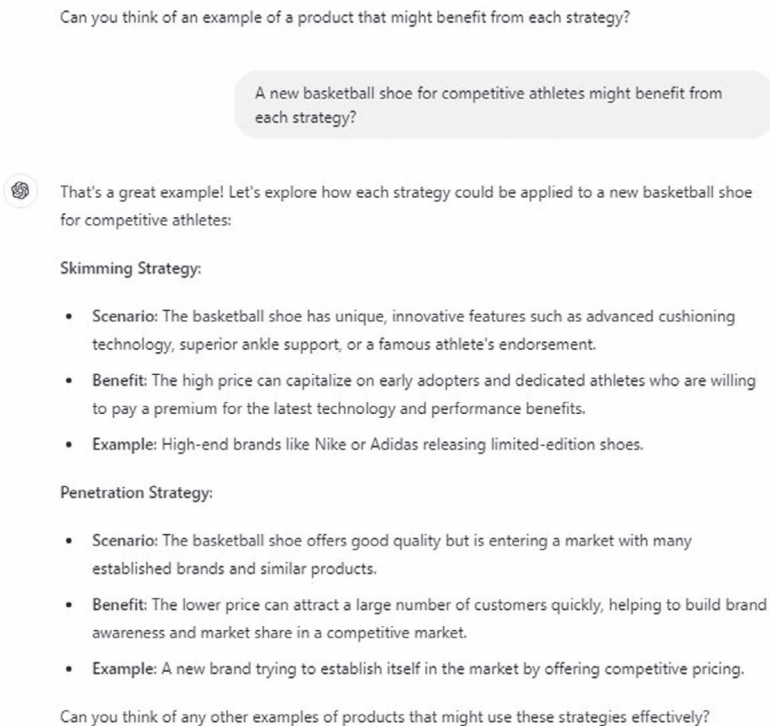
1. **Revise Your Draft:** Use the feedback to improve the depth, organization, and clarity of your response.
2. **Strengthen Your Argument:** Make your conclusion more definitive and persuasive by clearly linking your analysis to your final stance.
3. **Provide Evidence:** Where possible, include more evidence to support your claims about Netflix's strategies and their potential effectiveness.

How do you plan to revise your draft based on this feedback?

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**FIGURE 12.7** ChatGPT Output: Feedback on a Marketing Strategy Case Study

For example, in a *marketing principles class*, if a student struggles to grasp how to set the price for a new product, they can cast AI as a tutor to assist them. In this example, the conversation begins with the tutor (ChatGPT) asking the student what they already know about setting prices for a new product and if any specific methods or factors have been covered in their classes. The student responds by explaining that they have heard about penetration pricing and skimming but do not understand the difference and how they apply to new products. The tutor explains the two strategies and then begins to ask the student several questions such as, “What do you think might be a disadvantage of the skimming strategy?” and “Can you think of an example of a product that might benefit from each strategy?” After the student suggests specific product examples (e.g., a new basketball shoe or computer), the tutor asks the student what they think are the key factors a company should consider when choosing between the two strategies. The student provides ideas and answers, and the tutor reinforces and praises right answers and corrects wrong answers. The exchange is not merely a question-and-answer session; ChatGPT personalizes the tutoring session by inquiring, clarifying, challenging, and expanding on answers and examples. Prompts and the output can be viewed online (the full URL in Table 12.3). A portion of the output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.8.



**FIGURE 12.8** ChatGPT Output: Personal Tutoring on Pricing for a New Product

### Application 12.3 AI as a Tutor

Ask students to use AI as a tutor to help them better understand the concept of segmentation, targeting, positioning (STP). To do so, students must first provide instructions on how AI should act as a tutor (using a prompt provided by the instructor). Then, students are instructed to have a back-and-forth conversation with the AI tutor to help them grasp and practice applying STP in real-world scenarios.

After a student instructs AI how it should act as a tutor, the AI tutor will prompt the student to share what they know about STP, explain each component, and apply the concept to a new coffee brand. After the student responds, the AI tutor offers feedback and asks questions such as “How would you position the product to each target market?” The AI tutor and student conversation continues (question, response, feedback, question . . .).

After the tutoring session, ask students to reflect upon and discuss how their understanding of STP was enhanced through the experience.

### Use AI to Work Effectively in Teams

Students struggle with teamwork, whether it be communication, getting everyone to contribute, or finding a schedule that works for everyone. To help create a successful team environment, marketing educators can train students to use AI to help them create a team charter. The team charter can set goals and rules, and students will likely be more committed to the group effort by engaging in the process. According to Mollick and Mollick (2023a), a good prompt will ensure that students come out with explicit mutual expectations about the team members’ roles, the team’s short- and long-term goals, and the norms regarding interaction, communication, and treatment of team members.

For example, in a *marketing research class*, teams may be assigned to work on a semester-long project incorporating secondary and primary research. Members meet to create a team charter to create a successful team environment. ChatGPT begins the conversation by asking for a description of the project. Then, the team is asked to provide details about team goals, team member roles, and norms of conduct. Prompts and the output can be viewed online (the full URL is in Table 12.3). A portion of the output (the initial team charter) generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.9.

### Use AI as a Learner

A common belief exists that the best way to learn something is to teach it. Marketing educators can train students to take on the role of a teacher to help them identify gaps in and



Let's summarize what we have discussed. Here is your initial team charter based on the information shared:

Project Description	Team Goal(s)	Team Roles	Team Norms
Marketing research for starting a new coffee shop in town, including secondary, qualitative, and quantitative research.	1. Great communication 2. Collaboration 3. High-quality work aiming for an A grade	Team Leader (CMO): Sue Qualitative Research Lead: Carson Quantitative Research Lead: Grace Head Writer and Editor: Ryan	1. Respond to communications within 2-4 hours 2. Respect each other's opinions, agreeing to disagree 3. Collaborate on a shared Google document for the final project

It's good that you've had this initial conversation, but remember to revisit and possibly revise this charter as your project progresses to ensure it still works well for everyone.

**FIGURE 12.9** ChatGPT Output: Team Charter

master their knowledge on a topic, with AI taking on the role of the learner. According to Mollick and Mollick (2023a), a good prompt will ensure that AI knows its role and goal as a learner, give students choices about topics and their applications, require them to articulate ideas, and challenge them to evaluate the output and reassess their understanding and assumptions.

For example, in a *consumer behavior class*, students are assigned to gauge their grasp of how cultural factors influence consumer behavior. In doing so, they act as a teacher with AI as their student. The AI student asks what topic to explain and how to apply the topic. The student (teacher) asks the AI student to explain how cultural factors influence consumer behavior and to provide an example. In their role as teacher, the student then critiques the explanation and offers suggestions for improvement. Prompts and the output can be viewed online (the full URL is in Table 12.3). A portion of the output generated by ChatGPT 4o (with access to the Internet) is found in Figure 12.10.

## OPPORTUNITIES FOR MARKETING EDUCATORS IN THE AGE OF AI

Opportunities afforded to marketing educators for using AI go beyond the strategies and tactics presented in the AI-Powered Marketing Educator Framework. A significant opportunity is for marketing educators to use AI for efficiency gains in their work outside the classroom. AI can assist in performing administrative tasks that support student learning





Hi! I'm Alex, a marketing major at the university, and I'm happy to share what I know about how cultural factors influence consumer behavior.

Cultural factors significantly shape consumer behavior by influencing the values, perceptions, preferences, and behaviors of individuals within a society. These factors include traditions, social norms, language, religion, and lifestyle. Culture dictates what is considered acceptable or desirable, thereby affecting the purchasing decisions of consumers. For example, a consumer's cultural background can impact their choice of food, clothing, and even technology. Companies must understand these cultural nuances to effectively market their products and cater to the needs of different consumer segments.

### Application Example:

**Product/Brand:** Nike Running Shoes

**Target Consumer:** Young adults in Japan

### Cultural Factors:

#### 1. Collectivism vs. Individualism:

- In Japan, the culture leans towards collectivism, where group harmony and conformity are highly valued. Nike can tap into this by emphasizing community and team spirit in their marketing campaigns, perhaps promoting running clubs or group fitness activities.

#### 2. Work Ethic and Discipline:

- Japanese culture places a high emphasis on diligence and discipline. Marketing Nike Running Shoes as a tool to enhance personal discipline and improve performance can resonate well with young adults who are often balancing rigorous academic or professional commitments.

#### 3. Health Consciousness:

- There is a growing trend towards health and wellness in Japan. Highlighting the health benefits of running, such as improved cardiovascular health and stress relief, can appeal to health-conscious consumers.

#### 4. Technological Affinity:

- Japan is known for its technological advancements and affinity for innovative products. Nike can emphasize the technological features of their running shoes, such as advanced cushioning systems or smart shoes that track running metrics.

### Marketing Campaign Outline:

- **Slogan:** "Run Together, Achieve Together"
- **Advertisements:** Feature young adults running in groups through iconic Japanese landscapes, showcasing the sense of community and shared achievement.
- **Social Media Campaigns:** Create challenges and competitions that encourage group participation, with incentives for the best-performing teams.
- **Product Placement:** Collaborate with local influencers and athletes who embody discipline and commitment to promote the technological and health benefits of the running shoes.

### Feedback Request:

Teacher, how well did I explain how cultural factors influence consumer behavior and apply this concept to Nike Running Shoes in Japan? Could you please explain what I got right or wrong in my examples and explanation, and how I can improve next time? If everything is correct, I'd love to hear how my application of the concept was spot on. Thank you!



**FIGURE 12.10** ChatGPT Output: The Student as Teacher Evaluating the AI Learner's Grasp of Cultural Influences on Consumer Behavior

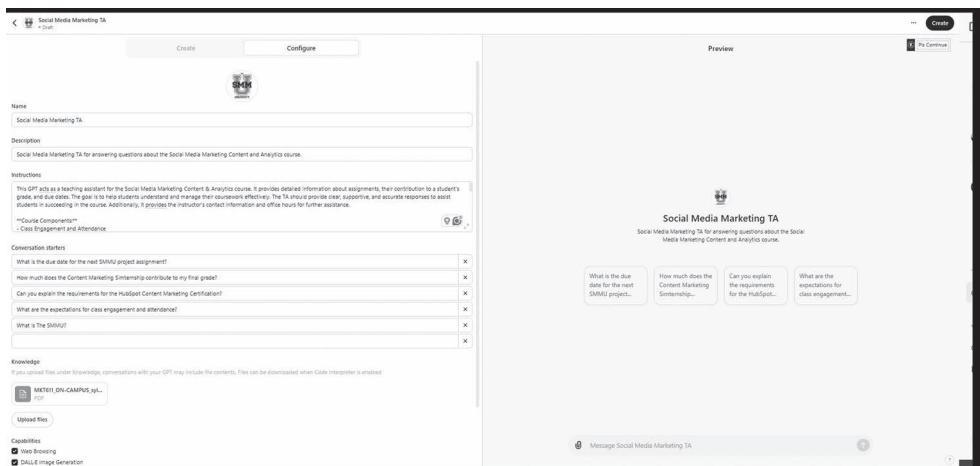
**TABLE 12.3** Links to ChatGPT Examples to Train Students to Use AI to Improve Their Learning

<i>Training Strategy (Project or Assignment)</i>	<i>ChatGPT Output</i>
Figure 12.7. Get Feedback on a Project (Draft of a Case Study)	<a href="https://chatgpt.com/share/89b040b7-270f-4c59-ba43-18469f280229">https://chatgpt.com/share/89b040b7-270f-4c59-ba43-18469f280229</a>
Figure 12.8. Personal Tutoring (Pricing of a New Product)	<a href="https://chatgpt.com/share/810e90e2-63fc-4546-8d6f-5bf6526b4bb4">https://chatgpt.com/share/810e90e2-63fc-4546-8d6f-5bf6526b4bb4</a>
Figure 12.9. Working Effectively in Teams (Create a Team Charter for Marketing Research Project)	<a href="https://chatgpt.com/share/fdde89b8-61a6-46df-a32f-ea0eb641352b">https://chatgpt.com/share/fdde89b8-61a6-46df-a32f-ea0eb641352b</a>
Figure 12.10. Using AI as a Learner (Teaching the Influence of Cultural Factors on Consumer Behavior)	<a href="https://chatgpt.com/share/fff35cb0-8973-4cc7-88d4-97437339253d">https://chatgpt.com/share/fff35cb0-8973-4cc7-88d4-97437339253d</a>

and engagement but have typically been difficult and very time-consuming for marketing educators, including, for example:

- 1 Student correspondence: Emails or announcements on LMS can be generated and address specific topics such as an introduction to a class at the beginning of a semester or assignment, an announcement about internship opportunities, etc.
- 2 Letters of recommendation: AI can draft a letter of recommendation after a student's resume and a job announcement are uploaded.
- 3 Feedback on student assignments: Personalized feedback can be provided by prompting AI with a student's submission, assignment guidelines and requirements, and grading criteria or a grading rubric.
- 4 Course content: AI can generate engaging course content such as slide decks and presentations.
- 5 Online or in-class activities: AI can generate ideas for learning activities online or in class to engage students and encourage discussion and interaction.
- 6 Learning outcomes: AI can assist in applying Bloom's taxonomy to develop higher-order learning outcomes for assignments.
- 7 Multiple-language course materials: AI can translate course materials into different languages, making the course more accessible to international students.
- 8 Grading rubrics: AI can generate or update a grading rubric based on an assignment's requirements. The rubric's number of criteria and levels can be adjusted, and descriptors for each level within those criteria can be generated.

Another opportunity for instructors to use AI to be more efficient outside the classroom is custom generative pre-trained transformers (GPTs), which are custom versions of ChatGPT that can be created for a specific purpose. Personalized chatbots to help with various tasks is one example. For example, the authors developed a custom GPT in



**FIGURE 12.11** A Custom GPT for Student Support: Social Media Marketing TA

ChatGPT entitled, “Social Media Marketing TA”. The TA is a chatbot that answers students’ questions about course policies, assignments, due dates, etc., for a social media marketing class taught by one of the authors and is available round-the-clock. The course syllabus was uploaded and acts as the knowledge base to draw information. The authors configured the GPT, incorporating several “conversation starters” (pre-loaded questions students can ask), and “trained” it by asking questions and making corrections when necessary. Figure 12.11 shows the GPT (unpublished) in the configuration and preview modes. Once the GPT is published, a shareable link (URL) can be shared with students through email, social media, or an LMS and included on a course syllabus.

## NAVIGATING THE CHALLENGES OF AI IN MARKETING EDUCATION

One of the biggest challenges for marketing educators is to get students to embrace AI as an *assistant and support tool* rather than a “do-all” that does all the work for them. Unfortunately, the authors’ experiences are that some students have misused and become over-reliant on AI in completing term papers and assignments. Marketing educators need to ensure that students do not miss out on developing critical thinking and problem-solving skills, learning to conduct research properly, and interacting with educators and peers (Mucharraz y Cano et al., 2023) and, fortunately, that can be achieved with the use of AI. Teaching students to critically evaluate AI output and compare it with reliable, valid sources of information, for example, can contribute to critical thinking and problem-solving skills.

Another challenge for marketing educators is the risks of teaching and evaluating students with the assistance of AI in light of the bias, limitations, and inaccuracy that may occur (Mucharraz y Cano et al., 2023). AI can produce plausible sounding but incorrect

information, exhibit biases (gender and racial bias, biases against particular viewpoints, approaches, or political affiliations), and violate students' privacy because data entered into AI can be used for future training (Mollick & Mollick, 2023a).

Embracing, using, and developing proficiency in AI is a big task, and the chapter has provided many strategies and tactics for marketing educators to do so. The marketing field is ever-changing and evolving, requiring educators to stay current and keep up with new knowledge, skills, methodologies, and technologies. However, when AI is thrown into the picture, the pressure for marketing educators to keep up escalates even further. Becoming an AI-powered marketing educator presents challenges staying current in the ever-changing, evolving field of AI, including new tools, capabilities, and ways to use AI in teaching and engaging students.

## BRIDGING EDUCATION AND PRACTICE

The chapter has focused on using AI in the marketing classroom and developing AI-powered marketing educators. Still, AI uses and applications in the industry are much broader, with "the greatest potential value of AI pertains to domains related to marketing and sales" (Davenport et al., 2020, p. 25). Online retailing, customer service, and business processes are just a few domains in the industry affected by AI (Davenport et al., 2020). In advertising and communications, AI segments audiences, generates creative content (such as producing commercials and writing ad copy), monitors ad performance, and optimizes ad spending (McAlister et al., 2024). AI will contribute to more innovative and more complex search engines and more targeted messages and solutions (Makhloq & Al Mubarak, 2024). As a result, "marketing education is facing a new frontier and needs to evaluate and adjust to these disruptive changes" (Ferrell & Ferrell, 2020, p. 5).

Elhajjar et al. (2021) explore the perspectives of students, educators, and practitioners in marketing on integrating AI into marketing education programs. From a practitioner perspective, the authors recommend that AI be integrated into marketing curricula and that students be aware of big data, machine learning, and deep learning. Unfortunately, while marketing students desire courses in AI, the authors suggest that most business schools are not ready to integrate AI into their programs because it would require significant resources, such as funding, research agendas related to AI, a strategic plan, and qualified faculty members. However, "this is not a time that marketing educators can be complacent and keep teaching the same content that they have taught for years" (Ferrell & Ferrell, 2020, p. 11).

Adjusting to the world of AI in marketing means close collaboration between marketing practitioners and educators. Together, they need to ensure that marketing graduates are prepared to use AI responsibly, efficiently, and effectively and understand the broad uses and applications of AI in marketing. Given the rapidly changing advances in AI, collaboration between practitioners and educators needs to be consistent, persistent, and intentional. Practitioners should guide educators in updating courses and materials and identifying new knowledge and skills graduates should have. In addition, students will "need to have educational opportunities to address how issues such as privacy, safety, and discrimination will be addressed in AI marketing activities" (Ferrell & Ferrell, 2020,

p. 11). Ferrell and Ferrell (2020) suggest that practitioners should be brought into classrooms to help educate students and faculty on AI marketing issues. Marketing associations can develop teaching workshops and provide networking opportunities so educators can retool and advance their skills and knowledge in AI.

## CHAPTER SUMMARY

AI has changed and will continue to change the world and discipline of marketing significantly. Both marketing educators and practitioners have been challenged to rethink the knowledge, skills, and competencies required to perform effectively and efficiently in this ever evolving and changing environment. AI is changing what and how marketing educators teach and affording them significant opportunities in how they work. AI is changing what and how students learn. Students may lose valuable critical thinking and problem-solving skills if they are too reliant on AI and misuse it.

However, though perhaps challenging and daunting to some, the rise of AI has resulted in many marketing educators recognizing the vast potential of AI for student learning and engagement. The chapter has presented an AI-Powered Marketing Educator framework to provide strategies, tactics, tools, and prompts for classroom use. Strategies for marketing educators to be more efficient and effective outside the classroom using AI are suggested. Strong collaboration between marketing practitioners and educators is encouraged to adequately prepare students for exciting, challenging, and fulfilling marketing careers. Finally, examples of assignments are presented with the hope that they inspire marketing educators to incorporate AI assignments throughout their courses. The fact remains that AI is here to stay, and those marketing educators who willingly and enthusiastically embrace its capabilities will better serve students and practitioners and, in turn, find more fulfillment in their academic careers.

## KEY TERMS

- **AI Literacy:** The ability to understand, use, monitor, and critically reflect on AI applications without necessarily being able to develop AI models.
- **ChatGPT:** A chatbot that uses natural language processing (NLP) to have human-like conversations and complete tasks.
- **Custom Generative Pre-trained Transformer (Custom GPT):** OpenAI's custom versions of ChatGPT allow the creation of a tailored version of ChatGPT to complete various tasks.
- **Generative Artificial Intelligence:** Advanced algorithms that can be used to create new content, including audio, code, images, text, simulations, and videos.
- **OpenAI:** An artificial intelligence research company that produces services such as ChatGPT.

**TABLE 12.4** AI and Online Resources\*

<i>Resource</i>	<i>URL</i>	<i>Description</i>
<b>EDUCAUSE</b>	<a href="https://library.educause.edu/topics/infrastructure-and-research-technologies/artificial-intelligence-ai">https://library.educause.edu/topics/infrastructure-and-research-technologies/artificial-intelligence-ai</a>	Offers a detailed action plan for integrating AI into higher education, including AI literacy training, policy development, and guidelines. The platform also provides a collaborative space for institutions to develop and share AI strategies.
<b>Google's Generative AI</b>	<a href="https://grow.google/ai-for-educators/">https://grow.google/ai-for-educators/</a>	A free, self-paced course designed to help educators integrate AI into their teaching methods. It provides practical applications such as creating assessments, personalizing instruction, and more.
<b>Marketing AI Institute</b>	<a href="http://www.marketingaiinstitute.com/">www.marketingaiinstitute.com/</a>	Comprehensive resources including the State of Marketing AI Report, which provides insights from over 1,800 marketers on AI understanding, usage, and adoption. They also offer various educational tools, including introductory courses and advanced AI piloting programs for marketers.
<b>MIT Sloan Teaching &amp; Learning Technologies AI Resource Hub</b>	<a href="https://mitsloanedtech.mit.edu/ai/">https://mitsloanedtech.mit.edu/ai/</a>	Comprehensive resources for faculty, including foundational AI concepts, practical tools, and subject-specific use cases. It also addresses policy, ethics, and responsible AI use in academic settings.
<b>Salesforce Artificial Intelligence Resource Center</b>	<a href="https://www.salesforce.com/resources/ai/#!page=1">www.salesforce.com/resources/ai/#!page=1</a>	Blog posts, guides, webinars, and customer stories to help learn how AI can help teams work more efficiently and create better customer experiences.
<b>Stukent</b>	<a href="http://www.stukent.com/marketing-ai-resources/">www.stukent.com/marketing-ai-resources/</a>	AI resources tailored for marketing educators. These resources include discussion prompts, activities, and tools that educators can incorporate into their curriculum to teach students how to leverage AI for data-driven insights, automation, and enhanced decision-making in marketing.

\*This list was generated with the help of ChatGPT 4o. Note: Given the rapid pace of technological advancements, for the most current and comprehensive list of marketing-related AI and online resources, please visit the Online Support Material ([www.routledge.com/9781032743332](http://www.routledge.com/9781032743332)) or scan the QR code.

## DISCUSSION QUESTIONS

- 1 Do you believe AI will replace marketing professionals, or will it enhance your efficiency and effectiveness in creating marketing content?
- 2 Evergreen content is content that remains relevant and useful for readers over a long period. Given that AI is a rapidly evolving field, are AI and evergreen content an oxymoron? Is it possible to create evergreen content related to AI? If so, how?
- 3 What does AI literacy mean to you? In which marketing applications do you believe it is most important to embrace AI literacy?
- 4 At which step in the prompt engineering process can poor information input have the most negative impact and why?
- 5 Marketing requires creativity—how can AI assist you in enhancing your creativity?
- 6 AI can be used to produce marketing content such as blogs and social media posts. What other marketing applications, functions, or use cases can benefit from using AI?
- 7 The voice capabilities of ChatGPT are an exciting application of AI. What marketing applications, functions, or use cases can benefit from the use of AI's voice capabilities?



**FIGURE 12.12** QR Code to Online Support Material

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